

EXHIBIT 10

In the Matter Of:

K.C., ET AL

-v-

INDIVIDUAL MEMBERS OF MEDICAL LICENSING BOARD OF INDIANA, ET AL

Daniel Shumer, M.D.

May 16, 2023

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<p>1 UNITED STATES DISTRICT COURT 2 SOUTHERN DISTRICT OF INDIANA 3 INDIANAPOLIS DIVISION</p> <p>4 K.C., et al.,) 5) 6 Plaintiffs,) 7) 8 -v-) CASE NO. 9) 1:23-cv-00595-JPH-KMB 10 THE INDIVIDUAL MEMBERS OF THE) 11 MEDICAL LICENSING BOARD OF) 12 INDIANA, in their official) 13 capacities, et al.,) 14) 15 Defendants.)</p> <p>16 The deposition upon oral examination of DANIEL 17 SHUMER, M.D., a witness produced by means of 18 videoconference and sworn before me, Melody M. 19 Goodrich, CM, Notary Public in and for the County of 20 St. Joseph, State of Indiana, taken on behalf of the 21 Defendants, with the witness being located in Ann 22 Arbor, Michigan, and all other participants appearing 23 via videoconference, on Tuesday, May 16, 2023, at 24 9:02 a.m., pursuant to the Federal Rules of Civil 25 Procedure.</p> <p>26 STEWART RICHARDSON & ASSOCIATES 27 Registered Professional Reporters 28 (800) 869-0873</p>	<p style="text-align: right;">Page 3</p> <p>1 INDEX OF EXAMINATION 2 3 PAGE 4 By Mr. Fisher6 5 6 INDEX OF EXHIBITS 7 8 SHUMER DESCRIPTION PAGE 9 Exhibit 1 Deposition Notice8 10 Exhibit 2 Complaint8 11 Exhibit 3 Senate Enrolled Act No. 4809 12 Exhibit 4 Expert Declaration10 13 Exhibit 5 Turban - January 202048 14 Exhibit 6 November 15, 2022 -57 Campbell 15 Exhibit 7 Fish - August 202059 16 Exhibit 8 Chung - February 1, 200270 17 Exhibit 9 Savic - November 201175 18 Exhibit 10 Luders - July 15, 200983 19 Exhibit 11 Bergland92 20 Exhibit 12 Rametti104 21 Exhibit 13 Reisner162 22 Exhibit 14 de Vries165 23 Exhibit 15 de Vries - 2014168 24 Exhibit 16 Turban 2020b192 25</p>
<p style="text-align: right;">Page 2</p> <p>1 APPEARANCES 2 (All participants via Zoom videoconference) 3 4 FOR THE PLAINTIFFS: 5 Harper S. Seldin, Esq. 6 Chase Strangio, Esq. 7 AMERICAN CIVIL LIBERTIES UNION FOUNDATION 8 125 Broad Street 9 New York, NY 10041 10 hseldin@aclu.org 11 cstrangio@aclu.org 12 and 13 Kenneth J. Falk, Esq. 14 Gavin M. Rose, Esq. 15 ACLU of INDIANA 16 1031 East Washington Street 17 Indianapolis, IN 46202 18 kfalk@aclu-in.org 19 grose@aclu-in.org 20 21 FOR THE DEFENDANTS: 22 Thomas M. Fisher, Esq. 23 Razi Lane, Esq. 24 OFFICE OF THE ATTORNEY GENERAL 25 302 West Washington Street IGCS Fifth Floor Indianapolis, IN 46204-2770 tom.fisher@atg.in.gov razi.lane@atg.in.gov 26 27 ALSO PRESENT: Shawn Weyerbacher 28 Brad Davis 29 John Vastag 30</p>	<p style="text-align: right;">Page 4</p> <p>1 INDEX OF EXHIBITS (CONT'D) 2 3 SHUMER DESCRIPTION PAGE 4 Exhibit 17 Kuper208 5 Exhibit 18 Costa211 6 Exhibit 19 Carmichael215 7 Exhibit 20 Achille216 8 Exhibit 21 van der Miesen220 9 Exhibit 22 Allen225 10 Exhibit 23 Chen230 11 Exhibit 24 Dhejne237 12 Exhibit 25 Clinical Practice238 13 Guidelines 14 Exhibit 26 Standards of Care240 15 Recommendation of the241 16 Council for Choices in 17 Health Care In Finland 18 Review Article - 20 January249 2023 19 Exhibit 29 Evidence Review:254 20 Gonadotrophin releasing 21 hormone analogues for 22 children and adolescents 23 with gender dysphoria 24 Exhibit 30 Evidence Review:257 25 Gender-affirming hormones for children and adolescents</p>

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1 COURT REPORTER: My name is Melody Goodrich,
2 an associate of Stewart Richardson & Associates,
3 1400 East Angela Boulevard, Suite 258, South
4 Bend, Indiana. Today's date is Tuesday, May 16,
5 2023. The time is 9:02 a.m. This deposition is
6 being held with all parties appearing remotely.
7 The deponent is Daniel Shumer, M.D.
8 Will counsel please identify themselves and
9 any persons present with you for the record, and
10 please stipulate to the swearing of the witness.
11 MR. SELDIN: Harper Seldin, ACLU, defending
12 Daniel Shumer. I'm here with him in Ann Arbor,
13 Michigan, and stipulated.
14 MR. FALK: And Ken Falk, also for the
15 plaintiffs from the ACLU of Indiana, along with
16 Gavin Rose, participating remotely.
17 MR. STRANGIO: And Chase Strangio, also from
18 the ACLU.
19 MR. FALK: Oh, sorry, Chase.
20 MR. STRANGIO: No, no worries.
21 Participating remotely with the plaintiffs.
22 MR. FISHER: Okay. Tom Fisher of the
23 Attorney General's Office representing the
24 defendants. I'm here with -- in the room with
25 me -- Brad Davis and John Vastag, V-A-S-T-A-G,

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1 who are law clerks, and then Razi Lane who's also
2 appearing by video.
3 DANIEL SUMER, M.D.,
4 having been first duly sworn or affirmed to tell
5 the truth, the whole truth, and nothing but the
6 truth, was examined and testified as follows:
7 EXAMINATION
8 BY MR. FISHER:
9 Q Good morning, Dr. Shumer.
10 A Good morning.
11 Q Can you hear me okay?
12 A I can. Thank you.
13 Q Good.
14 A Can you hear me?
15 Q Yes. Thank you.
16 So my name is Tom Fisher, as you heard
17 earlier. I'm a Deputy Attorney General and the
18 Solicitor General of Indiana, and I'm
19 representing the defendants in this case, the
20 state -- various state officials who have some
21 connection to Senate Enrolled Act 480 -- 480,
22 right? -- 480, yeah. And so I'll be taking your
23 deposition today.
24 Have you had your deposition taken before?
25 A I have.

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1 Q Okay. So you have some familiarity with how this
2 works. I'm going to ask questions. You need to
3 give truthful answers.
4 Is there any reason you can't understand my
5 questions today?
6 A There's not.
7 Q Any reason you can't give full and complete
8 testimony?
9 A No.
10 Q And you have Mr. Seldin in the room with you; is
11 that correct?
12 A That's correct.
13 Q Do you have any documents open in front of you?
14 A I have my final declaration.
15 Q Anything else?
16 A No.
17 Q Okay. All right.
18 MR. SELDIN: And just for the record, the
19 document he has in front of him is the as-filed
20 copy of his declaration that was filed at
21 ECF-262. He just has a clean copy from me.
22 MR. FISHER: Thank you. All right.
23 BY MR. FISHER:
24 Q All right. Let's pull up Exhibit 1, which is the
25 deposition notice.

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1 (Shumer Exhibit 1 marked.)
2 Q All right. Dr. Shumer, do you -- have you seen
3 this document before?
4 A I'm not sure that I have, no.
5 Q Okay. Well, just very briefly, this is the
6 notice of deposition directed to -- to you or to
7 take your deposition as a witness in this case.
8 I just want -- if you could just read it
9 over with -- for me, and when you're done, let me
10 know.
11 A Okay.
12 Q Is there anything in this notice that you don't
13 understand?
14 A No.
15 Q So you provided an expert report in this Indiana
16 case, and that's why we're here to depose you
17 today; is that correct?
18 A That's right.
19 Q Okay. Let's go ahead and pull up Exhibit 2,
20 which is the complaint.
21 (Shumer Exhibit 2 marked.)
22 Q All right. Dr. Shumer, have you seen this
23 document before?
24 A I'm not sure if I have.
25 Q Okay. Could --

<p style="text-align: right;">Page 9</p> <p>1 MR. FISHER: Shawn, go ahead and scroll down</p> <p>2 just a little bit more. Let's see if he can see</p> <p>3 the title there.</p> <p>4 Okay.</p> <p>5 BY MR. FISHER:</p> <p>6 Q Does this help you out at all? Have you seen</p> <p>7 this before?</p> <p>8 A I think so.</p> <p>9 Q You think so. Okay.</p> <p>10 But you're not sure if you've read the</p> <p>11 complaint before?</p> <p>12 A Yes, I have read this complaint.</p> <p>13 Q Okay. Good. So my purpose for putting it in</p> <p>14 front of you is only so that we can all agree</p> <p>15 that we're talking about this case. This is the</p> <p>16 subject of the -- of your testimony and of your</p> <p>17 expert report; is that accurate?</p> <p>18 A That's right.</p> <p>19 Q Okay. All right. Let's go ahead and bring up</p> <p>20 Exhibit 3, which is Senate Enrolled Act 480.</p> <p>21 (Shumer Exhibit 3 marked.)</p> <p>22 Q Doctor, have you seen this document before?</p> <p>23 A Yes.</p> <p>24 Q And just describe for me what it is, to your</p> <p>25 understanding.</p>	<p style="text-align: right;">Page 11</p> <p>1 Upon graduating medical school, I was a pediatric</p> <p>2 resident at the University of Vermont, Vermont</p> <p>3 Children's Hospital. Afterwards, I received my</p> <p>4 pediatric endocrinology fellowship at Boston</p> <p>5 Children's Hospital and concurrent with that a</p> <p>6 master's of public health at the T.H. Chan School</p> <p>7 of Public Health at Harvard University.</p> <p>8 Q Any board certifications?</p> <p>9 A Yeah. I'm board certified in pediatrics and</p> <p>10 pediatric endocrinology.</p> <p>11 Q And tell us about your work history following</p> <p>12 medical school.</p> <p>13 A So upon finishing my fellowship at Boston</p> <p>14 Children's Hospital, I was -- I began employment</p> <p>15 at Michigan Medicine, the University of Michigan,</p> <p>16 in 2015, as a pediatric endocrinologist, and I've</p> <p>17 worked there since.</p> <p>18 Q So do you have a clinical practice?</p> <p>19 A Yes. So it -- at the University of Michigan, I'm</p> <p>20 what's called an associate professor, which is</p> <p>21 just sort of an academic title. But within that</p> <p>22 I see patients as a clinician, and I have</p> <p>23 administrative roles and education roles.</p> <p>24 Q Okay. What -- tell us about your clinical</p> <p>25 practice. Who do you see in your clinical</p>
<p style="text-align: right;">Page 10</p> <p>1 A This is an act passed in the State of Indiana</p> <p>2 regarding gender-affirming care.</p> <p>3 Q Okay. And this is the subject of the lawsuit</p> <p>4 that you're testifying about?</p> <p>5 A Correct.</p> <p>6 Q All right. Let's go ahead and bring up</p> <p>7 Exhibit 4, which is Dr. Shumer's expert report --</p> <p>8 or expert declaration.</p> <p>9 (Shumer Exhibit 4 marked.)</p> <p>10 Q Okay. Doctor, do you recognize this document?</p> <p>11 A Yes.</p> <p>12 Q And just -- if you would, just recite for the</p> <p>13 record what it is, please.</p> <p>14 A This is my expert declaration regarding the law</p> <p>15 previously discussed.</p> <p>16 Q And it carries the caption of this case, and it</p> <p>17 was submitted in this case, correct?</p> <p>18 A Correct.</p> <p>19 Q Okay. Great. Okay. So I just want to start a</p> <p>20 little bit with some background, Doctor. Just</p> <p>21 tell us, if you would, please, about your</p> <p>22 education and training post-high school.</p> <p>23 A Sure. So I did my undergraduate at Northwestern</p> <p>24 University and continued there at the Feinberg</p> <p>25 School of Medicine at Northwestern University.</p>	<p style="text-align: right;">Page 12</p> <p>1 practice?</p> <p>2 A Yeah. So as a pediatric endocrinologist, I take</p> <p>3 care of kids with all sorts of endocrine</p> <p>4 problems, which has to do with hormones. So kids</p> <p>5 with Type 1 diabetes, thyroid problems, growth</p> <p>6 problems.</p> <p>7 But an area of focus in my career has been</p> <p>8 working with transgender youth.</p> <p>9 Q But your practice is more general than just</p> <p>10 transgender youth?</p> <p>11 A Right. So in a week, I have one half-day clinic</p> <p>12 of diabetes; I have one half day of endocrine; I</p> <p>13 have two half days of gender; and then I have a</p> <p>14 virtual day, which is a mix of everything.</p> <p>15 Q Okay. Do you have any areas of research in</p> <p>16 writing?</p> <p>17 A I've published several different topics, but I</p> <p>18 would say the majority recently of my, you know,</p> <p>19 academic writing has involved gender identity and</p> <p>20 the management of gender dysphoria in</p> <p>21 adolescents.</p> <p>22 Q How long have you been focusing on that?</p> <p>23 A Since my pediatric endocrine fellowship in</p> <p>24 Boston, so probably 2012 till the present.</p> <p>25 Q So from 2012 to the present, your principal area</p>

<p style="text-align: right;">Page 13</p> <p>1 of research and writing has been gender dysphoria 2 and transgender youth? 3 A That's correct. 4 Q Okay. Any subjects that were a focus of research 5 in writing before that? 6 A No. Before that I was just in training as a 7 medical student and resident. So my sort of 8 academic writing career started in fellowship. 9 Q Okay. So any other subjects on which you've 10 published papers? 11 A Yeah, there's several general endocrine papers 12 that I've published regarding various disorders, 13 subcutaneous fat necrosis, hypothyroidism. But 14 the bulk of the writing has focused on 15 gender-related topics, gender identity-related 16 topics. 17 Q Okay. So let's turn to your declaration. Again, 18 this is Exhibit 4. One thing I forgot to do is 19 have you verify your signature on page 23. So 20 let's do that. 21 There it is. 22 Doctor, is that your signature on that page? 23 A It is. 24 Q So paragraph 7 of your declaration, it says -- 25 let's go ahead and get to paragraph 7 there on</p>	<p style="text-align: right;">Page 15</p> <p>1 be talking more about today. 2 So when I'm saying the medical management of 3 transgender adolescents, I'm referring to the 4 management of adolescents with gender dysphoria. 5 Q Does that differ from the management of children 6 with gender dysphoria? 7 A Yes. So if maybe you could clarify what you mean 8 by "children." 9 Q Preadolescents. 10 A Correct. Yeah. So in preadolescents, a person 11 that is transgender or even with gender dysphoria 12 wouldn't -- wouldn't require or be prescribed 13 medications to treat gender dysphoria 14 specifically. 15 Q Do you handle preadolescents as well as 16 adolescents? 17 A Well, as a pediatric endocrinologist, I rarely 18 see preadolescents with gender dysphoria because 19 they wouldn't require medical intervention. But, 20 you know, sometimes if a patient that's a 21 preadolescent is referred to the gender clinic 22 here at the University of Michigan after their 23 sort of formal assessment, the family may want to 24 meet with me to just discuss -- discuss topics 25 around gender dysphoria.</p>
<p style="text-align: right;">Page 14</p> <p>1 page 2. 2 Okay. So it says, "A major focus of my 3 clinical, teaching, and research work pertains to 4 the assessment and medical management of 5 transgender adolescents." 6 Can you describe what medical management of 7 transgender adolescents involves, please. 8 A Sorry. Your audio cut out for a second. Can you 9 repeat that. 10 Q Oh. I would like for you to describe what the 11 medical management of transgender adolescents 12 involves. 13 A Sure. So I think that the first thing I would 14 say is that everyone, of course, has a gender 15 identity, that sometimes that gender identity 16 aligns with the sex assigned at birth, and 17 sometimes it doesn't. 18 When it doesn't, a person may then be 19 described as being transgender. A transgender 20 person may have distress associated with the 21 discordance between their gender identity and sex 22 assigned at birth and may meet criteria for a 23 diagnosis called gender dysphoria. 24 There's specific management options for 25 gender dysphoria that I'm assuming we're going to</p>	<p style="text-align: right;">Page 16</p> <p>1 So I sometimes see preadolescents but, of 2 course, wouldn't be prescribing medications to 3 them for gender dysphoria. 4 Q Do you ever recommend to them any nonmedical 5 treatments or therapies? 6 MR. SELDIN: Object to form. 7 A So when I see preadolescents and their family, 8 oftentimes I'm making sure that they're connected 9 to resources in their area. If there's supports 10 that can be put in place to help the child live a 11 happy, healthy childhood, then I can help connect 12 with -- I can help the family connect with those 13 resources. But a lot of that, to be honest, is 14 work being done by other members of our team, 15 like our social workers. 16 Q Do you ever recommend psychotherapy? 17 A Certainly if a young person is struggling with 18 anxiety or depression, that's -- connecting with 19 a good mental health professional is always a 20 good idea. So I would certainly recommend 21 psychotherapy in that situation. 22 Q Well, how often does that happen, would you say, 23 with preadolescents? 24 A I'm not sure. I think it's pretty variable. 25 Q Okay. So -- and then as far as treating,</p>

<p style="text-align: right;">Page 17</p> <p>1 managing transgender adolescents, how does that</p> <p>2 differ from managing transgender adults in your</p> <p>3 practice?</p> <p>4 MR. SELDIN: Object to form.</p> <p>5 A Well, I think adolescence is a -- it's a</p> <p>6 relatively long age range. So I'd say in early</p> <p>7 adolescence, as a pediatric endocrinologist, I'm</p> <p>8 thinking a lot about puberty, how puberty is</p> <p>9 starting, the stage at which a child's puberty is</p> <p>10 at.</p> <p>11 And so as you know, the WPATH Standards of</p> <p>12 Care and the Endocrine Society Clinical Practice</p> <p>13 Guidelines outline medical options for</p> <p>14 adolescents in earlier stages of puberty. In</p> <p>15 later adolescence, management options differ.</p> <p>16 So I think that management in adolescents</p> <p>17 oftentimes depends on the age and stage of the</p> <p>18 patient that we're talking about.</p> <p>19 Does that answer your question?</p> <p>20 Q Have you ever treated adults -- transgender</p> <p>21 adults?</p> <p>22 A Yes. So as a pediatric endocrinologist, in our</p> <p>23 pediatric gender clinic, all of our new patients</p> <p>24 are under 18, but that -- I oftentimes treat</p> <p>25 patients as they, you know, turn 18 and then, you</p>	<p style="text-align: right;">Page 19</p> <p>1 offer?</p> <p>2 A So gender dysphoria is -- management is pretty</p> <p>3 well defined by, for example, the WPATH Standards</p> <p>4 of Care and the Endocrine Society Clinical</p> <p>5 Practice Guidelines. The use of -- in terms of</p> <p>6 actual medical interventions, the use of GnRH</p> <p>7 agonists and hormonal interventions may be</p> <p>8 appropriate for patients with gender dysphoria</p> <p>9 that we see. Those are certainly things that are</p> <p>10 offered if a patient would benefit from them.</p> <p>11 We have also mental health team members who</p> <p>12 can, you know, provide support and other</p> <p>13 referrals for any other supportive care that a</p> <p>14 patient may need.</p> <p>15 Q You mentioned GnRH agonists. Are those sometimes</p> <p>16 called puberty blockers?</p> <p>17 A They are.</p> <p>18 Q What about surgeries for your patients? Do you</p> <p>19 offer those?</p> <p>20 A No, not in the child and adolescent gender clinic</p> <p>21 here at Michigan Medicine, we don't.</p> <p>22 Q Do you refer adolescents for surgeries elsewhere?</p> <p>23 MR. SELDIN: Object to form.</p> <p>24 A We do.</p> <p>25 Q And where do you refer them?</p>
<p style="text-align: right;">Page 18</p> <p>1 know, enter young adulthood before sending them</p> <p>2 off to adult care. So I do have several young</p> <p>3 adults in my practice.</p> <p>4 Q And I guess I'm wondering just from the</p> <p>5 standpoint of thinking about how your patients --</p> <p>6 what their -- consider their options, understand</p> <p>7 what their options are. Does that process of</p> <p>8 discussion with the patient change between when</p> <p>9 they're, say, 15 or 16 and when they're maybe 20?</p> <p>10 MR. SELDIN: Object to form.</p> <p>11 A Well, I think every patient is a unique</p> <p>12 individual. Right? So when we're seeing any</p> <p>13 patient, we're taking a history, doing a physical</p> <p>14 exam. You know, prior to even me seeing them, I</p> <p>15 already know a lot about the patient because</p> <p>16 they've undergone a biopsychosocial assessment</p> <p>17 from other members of our team.</p> <p>18 And so each patient, you know, is assessed</p> <p>19 individually and then options for if they -- if</p> <p>20 they have any diagnosis at all, then that</p> <p>21 diagnosis is reviewed with them and options are</p> <p>22 discussed that may be different depending on</p> <p>23 which patient it is, and, of course, different</p> <p>24 ages would have different considerations.</p> <p>25 Q What gender dysphoria treatments does your clinic</p>	<p style="text-align: right;">Page 20</p> <p>1 A So primarily we're talking about chest surgery</p> <p>2 when we're referring to adolescents, and there's</p> <p>3 several options in southeast Michigan that the</p> <p>4 patients can be referred to.</p> <p>5 Q What do you mean by "chest surgery"?</p> <p>6 A I would say the majority of patients that I've</p> <p>7 seen that have had a gender-affirming surgery,</p> <p>8 that surgery has been masculinizing chest</p> <p>9 surgery, also sometimes referred to as top</p> <p>10 surgery.</p> <p>11 Q What does that mean?</p> <p>12 A It means a surgical intervention to help a person</p> <p>13 to have a more masculine-appearing chest by</p> <p>14 removing breasts.</p> <p>15 Q Is that different from a double mastectomy?</p> <p>16 MR. SELDIN: Object to form.</p> <p>17 A I would say that the double mastectomy is another</p> <p>18 term for the same thing that we're talking about.</p> <p>19 I use the term "masculinizing chest surgery"</p> <p>20 because I think that the goal oftentimes of a</p> <p>21 double mastectomy, for example, for a cisgender</p> <p>22 woman is to, for example, remove breast cancer.</p> <p>23 Whereas in a masculinizing chest surgery,</p> <p>24 we're similarly removing breast tissue, but</p> <p>25 the -- the end goal is to create a</p>

<p style="text-align: right;">Page 21</p> <p>1 masculinization of the chest appearance.</p> <p>2 Q Why don't you do the surgeries there at your --</p> <p>3 at the University of Michigan?</p> <p>4 MR. SELDIN: Object to form.</p> <p>5 A We do do surgeries at the University of Michigan,</p> <p>6 just not in the child and adolescent gender</p> <p>7 clinic.</p> <p>8 Q Oh, I see. So when you refer your patients for,</p> <p>9 for example, top surgery, do you sometimes refer</p> <p>10 them within your medical system to surgeons?</p> <p>11 A Yes.</p> <p>12 Q Okay. So surgeons within the University of</p> <p>13 Michigan medical system sometimes do perform top</p> <p>14 surgery on gender dysphoric adolescents?</p> <p>15 MR. SELDIN: Object to form.</p> <p>16 A Yes.</p> <p>17 Q All right. So you started to get into this a</p> <p>18 little bit earlier, but I think we need to kind</p> <p>19 of fall back and talk about a couple of basic</p> <p>20 ideas.</p> <p>21 So from your perspective, what is "sex"?</p> <p>22 MR. SELDIN: Object to form.</p> <p>23 A "Sex" is a way that we can try to classify people</p> <p>24 into groups, male and female, that encompasses a</p> <p>25 variety of different factors.</p>	<p style="text-align: right;">Page 23</p> <p>1 anatomic sex of male, chromosomal sex of male,</p> <p>2 hormonal sex of male, and a gender identity of</p> <p>3 female.</p> <p>4 If that person, you know -- I would need to</p> <p>5 know more about this hypothetical person, I</p> <p>6 suppose, how they -- how that gender identity --</p> <p>7 so I guess to answer your question, that person I</p> <p>8 would consider female for the purposes of</p> <p>9 interacting with them because of their gender</p> <p>10 identity.</p> <p>11 Q What about for other purposes?</p> <p>12 MR. SELDIN: Object to form.</p> <p>13 A A person whose -- a person whose gender identity</p> <p>14 is female -- I guess I would ask why -- why would</p> <p>15 I be trying to -- what would be -- what would I</p> <p>16 be using the determination of sex for? Right?</p> <p>17 So the --</p> <p>18 Q I didn't mean to cut you off.</p> <p>19 A Oh, that's it. Go ahead.</p> <p>20 Q I was thinking clinically.</p> <p>21 A Yeah.</p> <p>22 Q You know, if a person has health issues, wouldn't</p> <p>23 you -- is gender identity what you're going to go</p> <p>24 by?</p> <p>25 MR. SELDIN: Object to form.</p>
<p style="text-align: right;">Page 22</p> <p>1 Q Okay. What are those factors?</p> <p>2 A Well, I think that the first thing to know is</p> <p>3 that there's a lot of different -- it would be</p> <p>4 nice to sort of say sex is easily separated,</p> <p>5 male, female, here, here. But when you think</p> <p>6 of -- when you look at the science, there's a lot</p> <p>7 going on that can contribute to understanding of</p> <p>8 sex, including things like someone's chromosomes,</p> <p>9 someone's anatomy, hormones, gender identity.</p> <p>10 Q So is sex something that can be determined solely</p> <p>11 from objective observation of evidence?</p> <p>12 MR. SELDIN: Object to form.</p> <p>13 A So a lot of those components can be, of course.</p> <p>14 Right? So you can measure someone's chromosomes</p> <p>15 under a microscope. There's, you know, visual</p> <p>16 appearance of anatomy that can be ascertained.</p> <p>17 Gender identity, that element of sex doesn't have</p> <p>18 a discrete test in a similar way like</p> <p>19 chromosomes. Hormones you can measure in a lab.</p> <p>20 Q Well, if a person's anatomy, chromosomes,</p> <p>21 hormones all say that that person is male, but</p> <p>22 the person says my gender identity is female,</p> <p>23 what sex is that person?</p> <p>24 MR. SELDIN: Object to form.</p> <p>25 A Well, I would say that that person has an</p>	<p style="text-align: right;">Page 24</p> <p>1 A Yeah. So I think it really depends. Right? So</p> <p>2 if someone has a gender identity of -- as</p> <p>3 female -- right? -- but they have an anatomic</p> <p>4 problem with their prostate, it's important to</p> <p>5 know that they have a prostate because that part</p> <p>6 is -- part of their body is what we're focusing</p> <p>7 our medical attention on.</p> <p>8 So in the end, I think that, you know, we</p> <p>9 really have to put it in context, that the</p> <p>10 patient is a person with a lot of different, you</p> <p>11 know, relevant elements.</p> <p>12 So in that situation, you know, I would be</p> <p>13 treating that woman's prostate problem. She has</p> <p>14 a prostate that's part of her anatomy.</p> <p>15 I'm not sure if that answers your question.</p> <p>16 Q In part. I guess I'm still wondering what the</p> <p>17 sex of that person is.</p> <p>18 MR. SELDIN: Object to form.</p> <p>19 A Female would be the answer.</p> <p>20 Q So is it fair to say, then, that what matters in</p> <p>21 determining sex is the person's gender identity?</p> <p>22 A I guess I would say matter in what way. Right?</p> <p>23 So if I'm interacting with that person in -- in a</p> <p>24 social context, of course that person would be a</p> <p>25 female. If she needs prostate surgery, that's a</p>

<p style="text-align: right;">Page 25</p> <p>1 surgery on an anatomic male part. That anatomic</p> <p>2 part might require surgery.</p> <p>3 So, you know, putting your -- you need to</p> <p>4 put the question in context for it to matter what</p> <p>5 sex that person is.</p> <p>6 Q I see. So a person can be one sex for some</p> <p>7 purposes but a different sex for other purposes?</p> <p>8 MR. SELDIN: Object to form.</p> <p>9 A I would not -- I would not agree with that</p> <p>10 statement, no.</p> <p>11 Q Okay. Well, I'm trying -- I'm just trying to</p> <p>12 understand how you think about sex and sort of</p> <p>13 what it's used for. I thought you said that a</p> <p>14 person's sex depends on the context in which it's</p> <p>15 used.</p> <p>16 MR. SELDIN: Object to form. Misstates</p> <p>17 testimony.</p> <p>18 A A person's sex is more complicated than a black</p> <p>19 or white male or female, is what I'm trying to</p> <p>20 convey.</p> <p>21 So that person has, you know -- that person</p> <p>22 has different elements of their sex and so, you</p> <p>23 know, the -- so that the -- you know, the</p> <p>24 question of what sex is that person, you know, is</p> <p>25 more complicated than a simple answer.</p>	<p style="text-align: right;">Page 27</p> <p>1 Q Okay. Are you aware of any biological tests,</p> <p>2 such as an imaging study or a hormone level, that</p> <p>3 can reliably diagnose gender dysphoria?</p> <p>4 MR. SELDIN: Object to form.</p> <p>5 A I'm not.</p> <p>6 Q Let's take a look at paragraph 28 of your</p> <p>7 declaration. So the first line of -- are you</p> <p>8 with me on paragraph 28, Doctor?</p> <p>9 A Yep.</p> <p>10 Q First line, it says, "A person's understanding of</p> <p>11 their gender identity may evolve over time in the</p> <p>12 natural course of their life." And I don't mean</p> <p>13 to take it out of context. I just don't want to</p> <p>14 read the rest of the sentence. But if you think</p> <p>15 it's relevant, you can correct me.</p> <p>16 I just want to get at the question of is</p> <p>17 it -- a person's understanding of their gender</p> <p>18 identity and a person's gender identity, are</p> <p>19 those the same thing, or can those be different?</p> <p>20 MR. SELDIN: Object to form.</p> <p>21 A I think they're different. I think that a</p> <p>22 person's understanding of their gender identity</p> <p>23 may evolve over time, but the gender identity in</p> <p>24 my -- in my clinical experience does not seem to</p> <p>25 change over time.</p>
<p style="text-align: right;">Page 26</p> <p>1 Even though it might be convenient to try to</p> <p>2 separate people into these boxes, male and</p> <p>3 female, when we're talking about what is the sex</p> <p>4 of a person, that's a more complicated,</p> <p>5 unfortunately, biologic question.</p> <p>6 Q I guess I thought a minute ago you said that in</p> <p>7 my hypothetical the person -- because the person</p> <p>8 was -- the gender identity was female, that that</p> <p>9 person -- person's sex was female.</p> <p>10 A So if -- I guess I need -- I need to understand</p> <p>11 what the purpose of classifying that person's sex</p> <p>12 is in your hypothetical because --</p> <p>13 Q Okay.</p> <p>14 A -- I think I've explained my definition of sex</p> <p>15 sufficiently to understand that my definition of</p> <p>16 sex is that it's made up of many different</p> <p>17 components.</p> <p>18 And I said that in interacting with that</p> <p>19 person with the gender identity of female, if you</p> <p>20 asked, "What is the sex of that person," as a</p> <p>21 blanket statement I would say female. But if you</p> <p>22 want to get into the nitty-gritty of all of the</p> <p>23 elements of that person's sex, then we have to go</p> <p>24 back to all of those elements that we've been</p> <p>25 talking about.</p>	<p style="text-align: right;">Page 28</p> <p>1 Q How do you discern someone's gender identity</p> <p>2 apart from that person's understanding of their</p> <p>3 gender identity?</p> <p>4 MR. SELDIN: Object to form.</p> <p>5 A Their understanding of their gender identity is a</p> <p>6 really important part of understanding their</p> <p>7 gender identity. So, you know, I think that, of</p> <p>8 course, gender identity is -- well, I would</p> <p>9 describe gender identity as one's deeply-felt</p> <p>10 internal sense of one's self as male, female,</p> <p>11 boy, girl, man, woman, or maybe somewhere in</p> <p>12 between or some other gender identity.</p> <p>13 And to understand that gender identity, it</p> <p>14 involves talking to the person and helping to</p> <p>15 understand their understanding of that gender</p> <p>16 identity.</p> <p>17 Q Have you ever met someone whose gender identity</p> <p>18 in your estimation differed from that person's</p> <p>19 understanding of their own gender identity?</p> <p>20 MR. SELDIN: Object to form.</p> <p>21 A Of course. So if you're thinking about, you</p> <p>22 know, young children -- right? -- young children</p> <p>23 don't have a self-concept of gender identity.</p> <p>24 So, you know, their understanding of their gender</p> <p>25 identity, you know, before they're able to talk</p>

<p style="text-align: right;">Page 29</p> <p>1 is unknowable. That someone may be -- I think</p> <p>2 that in -- for all of us in childhood, we're</p> <p>3 going through a process of understanding</p> <p>4 ourselves in all sorts of different ways, from</p> <p>5 our likes and dislikes, our sexual orientation,</p> <p>6 our gender identity, and as -- as we continue to</p> <p>7 grow and interact with the world, the evolution</p> <p>8 of understanding of gender identity evolves as</p> <p>9 well.</p> <p>10 And so -- so the -- I think that's the</p> <p>11 answer to the question.</p> <p>12 Q Well, I probably just didn't get it across quite</p> <p>13 clearly enough. But let's go back to those young</p> <p>14 children.</p> <p>15 When you were giving me your answer and</p> <p>16 talking about young children, how young were you</p> <p>17 thinking of?</p> <p>18 A Oh, I don't know. I think that, for example,</p> <p>19 prepubertal children, you know, are exploring the</p> <p>20 world around them and understanding their lives</p> <p>21 in all sorts of different ways, including their</p> <p>22 gender identity.</p> <p>23 Q Okay. And my question was, simply: Have you</p> <p>24 ever encountered a person where you discerned</p> <p>25 their gender identity to be something other than</p>	<p style="text-align: right;">Page 31</p> <p>1 that same person 6 months, 12 months later, and</p> <p>2 they say -- they might say, you know, the</p> <p>3 interval time has been so helpful in my</p> <p>4 exploration of gender identity and now it's more</p> <p>5 clear to me that my gender identity is -- that I</p> <p>6 identify as a boy.</p> <p>7 And so that would be a person who has a male</p> <p>8 gender identity, and their evolution of</p> <p>9 understanding of their gender identity has</p> <p>10 changed over time.</p> <p>11 Q Okay. But in that initial visit where there was</p> <p>12 some uncertainty, would you know at that point</p> <p>13 what their gender identity was?</p> <p>14 MR. SELDIN: Object to form.</p> <p>15 A I would not.</p> <p>16 Q And then later when that person comes back and</p> <p>17 says, "Okay, I identify now as a boy," would you,</p> <p>18 apart from what they've told you that they</p> <p>19 understand about their gender identity, have any</p> <p>20 evidence for what their gender identity is?</p> <p>21 MR. SELDIN: Object to form.</p> <p>22 A Well, as a pediatric endocrinologist, I -- I feel</p> <p>23 so fortunate that I get to work with amazing team</p> <p>24 members, like mental health professionals, that</p> <p>25 can help understand this process with patients,</p>
<p style="text-align: right;">Page 30</p> <p>1 what that person understood their own gender</p> <p>2 identity to be?</p> <p>3 MR. SELDIN: Object to form.</p> <p>4 A I don't know.</p> <p>5 Q You don't know. So how do you know that a</p> <p>6 person's understanding of gender identity is</p> <p>7 different from their actual -- or could be</p> <p>8 different from their actual gender identity?</p> <p>9 MR. SELDIN: Object to form.</p> <p>10 A So, for example, there may be a patient that I'm</p> <p>11 seeing who is an adolescent, and they are -- they</p> <p>12 are coming to the gender clinic for evaluation of</p> <p>13 potential management. In their assessment, they</p> <p>14 describe understanding that they're not sure what</p> <p>15 their gender identity is, but something feels</p> <p>16 different, that they don't -- let's say this</p> <p>17 person is assigned female at birth, that they</p> <p>18 don't feel so much like a girl, but they're</p> <p>19 continuing to work to understand what that</p> <p>20 feeling is all about.</p> <p>21 At the end of our interaction, the plan</p> <p>22 might be to go -- you know, continue to explore</p> <p>23 that gender identity with their -- with their</p> <p>24 family, with perhaps a mental health</p> <p>25 professional. And then subsequently I might see</p>	<p style="text-align: right;">Page 32</p> <p>1 that we do also have tools at our disposal.</p> <p>2 There's, for example, the clinical diagnosis of</p> <p>3 gender dysphoria. Because, of course, a person</p> <p>4 who has a difference in gender identity but</p> <p>5 doesn't have any distress associated with that</p> <p>6 may not need to see me at all.</p> <p>7 But someone who has, you know, clinical</p> <p>8 gender dysphoria and -- and that person -- and</p> <p>9 that person has a gender identity that is</p> <p>10 different from the sex assigned at birth, that</p> <p>11 would be a tool to help understand that person's</p> <p>12 gender identity and how that's affecting them.</p> <p>13 Q What would be a tool?</p> <p>14 A The assessment and -- the assessment by the</p> <p>15 mental health professional that -- that is seeing</p> <p>16 them -- sorry.</p> <p>17 Can you ask the initial question again? I</p> <p>18 think I lost myself there.</p> <p>19 Q Yeah. That's okay. I was just wondering when</p> <p>20 the person comes back -- I mean, going back to</p> <p>21 your hypothetical. The person comes in and is</p> <p>22 uncertain, and then you suggest some ways to</p> <p>23 consider it for a while. And then the person</p> <p>24 comes back six months later and says, "Okay, I'm</p> <p>25 more certain now that I was born with, you know,</p>

<p style="text-align: right;">Page 33</p> <p>1 a female body, but I identify now as a boy."</p> <p>2 And I'm asking apart from that person's</p> <p>3 communication of their understanding of their</p> <p>4 gender identity, how would you know what their</p> <p>5 gender identity is?</p> <p>6 MR. SELDIN: Object to form.</p> <p>7 A Well, I think a lot of it does have to do with</p> <p>8 that person's understanding of their gender</p> <p>9 identity, and, you know, this is -- this is what</p> <p>10 mental health professionals are trained to do, to</p> <p>11 work with folks, partner with patients and</p> <p>12 families, to help understand these really</p> <p>13 challenging concepts.</p> <p>14 There is no test -- there's no blood test.</p> <p>15 There's no X-ray. But the work of</p> <p>16 highly-qualified mental health professionals</p> <p>17 helps to inform the rest of the medical team</p> <p>18 whether someone's -- whether a person that we're</p> <p>19 seeing may benefit from intervention for gender</p> <p>20 dysphoria.</p> <p>21 Q What is the error rate for determining if someone</p> <p>22 is transgender?</p> <p>23 MR. SELDIN: Object to form.</p> <p>24 A Well, I've never really thought of it that way.</p> <p>25 You know, I think that what's more clinically</p>	<p style="text-align: right;">Page 35</p> <p>1 you're aware of, what is the error rate for</p> <p>2 diagnosing gender dysphoria?</p> <p>3 MR. SELDIN: Object to form.</p> <p>4 A I certainly have -- there's certainly people out</p> <p>5 there that have -- that describe that at one</p> <p>6 point they thought they were transgender,</p> <p>7 received treatment, and now identify as</p> <p>8 cisgender. The rate of that happening seems to</p> <p>9 be less than 1 percent.</p> <p>10 Q What's your basis for that?</p> <p>11 A So I think that there's -- the statement that the</p> <p>12 rate of someone that is treated for gender</p> <p>13 dysphoria all of a sudden identifying as</p> <p>14 cisgender being extremely low comes from lots of</p> <p>15 difference sources. Right?</p> <p>16 So there's -- there's some, for example,</p> <p>17 longitudinal studies of treatment of gender</p> <p>18 dysphoria. There are retrospective studies.</p> <p>19 There's, you know, the -- I think the -- the way</p> <p>20 to quantify what you're asking is challenging --</p> <p>21 right? -- because you can't capture everyone that</p> <p>22 has ever identified as transgender and then</p> <p>23 compared them later on.</p> <p>24 What you can come closer to doing, that is</p> <p>25 people that have received medical care. Right?</p>
<p style="text-align: right;">Page 34</p> <p>1 relevant is, you know, the -- the treatment of</p> <p>2 gender dysphoria -- right? -- so that if someone</p> <p>3 has -- has a diagnosis of gender dysphoria and</p> <p>4 may benefit from treatment, then the likelihood</p> <p>5 that that person's gender identity persists</p> <p>6 across time is extremely high.</p> <p>7 Q Okay. But is there an error rate of diagnosing</p> <p>8 gender dysphoria?</p> <p>9 MR. SELDIN: Object to form.</p> <p>10 A In my clinical experience, the patients that I've</p> <p>11 seen with a diagnosis of gender dysphoria, you</p> <p>12 know, has had -- have had -- for example, I</p> <p>13 haven't had a patient that I've treated with</p> <p>14 gender dysphoria that then comes back several</p> <p>15 years later and says, "Guess what? My gender</p> <p>16 identity is -- I was completely wrong. I'm</p> <p>17 cisgender."</p> <p>18 So I have not had that experience, no.</p> <p>19 Q Well, but you're in this case testifying as an</p> <p>20 expert, right? You're not just testifying based</p> <p>21 on your clinical experience. That was my</p> <p>22 understanding at least. Is that correct?</p> <p>23 MR. SELDIN: Object to form.</p> <p>24 A Yes, I'm testifying as an expert.</p> <p>25 Q So according to the literature and all that</p>	<p style="text-align: right;">Page 36</p> <p>1 And so in review of cases of people with gender</p> <p>2 dysphoria that have received medical care,</p> <p>3 numbers of people that identify as cisgender</p> <p>4 subsequently, is low.</p> <p>5 Q Well, I guess I'm wondering, to have -- if you</p> <p>6 are designing a study to capture the error rate</p> <p>7 of diagnosing gender dysphoria, what would be</p> <p>8 necessary to have a reliable result? How would</p> <p>9 you structure that study?</p> <p>10 MR. SELDIN: Object to form.</p> <p>11 A So let me back up for a second because, you know,</p> <p>12 the diagnosis of gender dysphoria -- there's a</p> <p>13 specific definition of gender dysphoria. Right?</p> <p>14 So if a person has gender dysphoria at any</p> <p>15 one point in time, then that person is meeting</p> <p>16 specific criteria. Right? So that a person with</p> <p>17 gender dysphoria, for example, has a gender</p> <p>18 identity that's different from the sex assigned</p> <p>19 at birth. They meet 206 of the other criteria.</p> <p>20 It's affecting them clinically in some -- it's</p> <p>21 affecting them negatively in other aspects of</p> <p>22 their life. So if a person has gender dysphoria,</p> <p>23 by definition they meet that definition. They</p> <p>24 meet those criteria.</p> <p>25 So at that point in time, there's no error</p>

<p style="text-align: right;">Page 37</p> <p>1 rate. That person has gender dysphoria. So</p> <p>2 you're asking a different question.</p> <p>3 Q Well, no. I think let's go there. So is it</p> <p>4 impossible to misdiagnose gender dysphoria in</p> <p>5 your view?</p> <p>6 MR. SELDIN: Object to form.</p> <p>7 A Just like all diagnoses in the DSM, the diagnosis</p> <p>8 is based on a clinical interview. So, for</p> <p>9 example, if a -- if you ask a patient a question</p> <p>10 and they give you a false answer, then you may</p> <p>11 diagnose them with gender dysphoria because they</p> <p>12 are not being truthful. But if a person is not</p> <p>13 able to participate in the interview, then you</p> <p>14 would have a harder time diagnosing gender</p> <p>15 dysphoria.</p> <p>16 You know, I'm speaking as a pediatric</p> <p>17 endocrinologist that doesn't make a diagnosis of</p> <p>18 gender dysphoria, of course, but -- but just like</p> <p>19 the diagnosis of depression or schizophrenia or</p> <p>20 anxiety, all of these have clinical criteria, and</p> <p>21 so someone is diagnosed based on meeting those</p> <p>22 criteria.</p> <p>23 Q Well, I guess when using a diagnostic tool in</p> <p>24 trying to determine whether it's a useful</p> <p>25 diagnostic tool, as a scientist is it important</p>	<p style="text-align: right;">Page 39</p> <p>1 affect them. Is that something that is making it</p> <p>2 harder for them to accomplish tasks, like going</p> <p>3 to school or getting a job or leading a happy,</p> <p>4 healthy, productive life?</p> <p>5 As a whole, we understand that people with</p> <p>6 gender dysphoria may benefit from medical</p> <p>7 interventions -- right? -- such as</p> <p>8 gender-affirming hormones, for example. So if --</p> <p>9 if we then take data from the use of</p> <p>10 gender-affirming hormones to treat gender</p> <p>11 dysphoria and we see improvement or positive</p> <p>12 impact on the gender dysphoria, then that helps</p> <p>13 to validate that the criteria used to diagnose</p> <p>14 gender dysphoria is helpful.</p> <p>15 Q So you don't really know until you treat the</p> <p>16 child whether your diagnosis was correct?</p> <p>17 MR. SELDIN: Object to form.</p> <p>18 A No, that's not what I said.</p> <p>19 I said that because of the body of evidence</p> <p>20 in the -- regarding the positive effects of</p> <p>21 treatment of gender dysphoria, we understand</p> <p>22 that -- that the use of that diagnosis can be</p> <p>23 helpful in making management decisions.</p> <p>24 Q Can be helpful. Are there times when it's not</p> <p>25 helpful?</p>
<p style="text-align: right;">Page 38</p> <p>1 to know what the error rate of that tool is?</p> <p>2 MR. SELDIN: Object to form.</p> <p>3 A Well, gender dysphoria is defined as the --</p> <p>4 someone meets the diagnosis of gender dysphoria</p> <p>5 only if they have the criteria outlined in the</p> <p>6 DSM. So I'm not -- I guess I'm not understanding</p> <p>7 your question.</p> <p>8 Q I guess I'm wondering how you know that that test</p> <p>9 gets it right every time.</p> <p>10 MR. SELDIN: Object to form.</p> <p>11 A Okay. I think I understand. So I think maybe --</p> <p>12 maybe implicit in your question is, well, what do</p> <p>13 we do with the diagnosis of gender dysphoria.</p> <p>14 Right? So if someone meets criteria for gender</p> <p>15 dysphoria, what does that mean and what does that</p> <p>16 imply for the future?</p> <p>17 If a person meets criteria for gender</p> <p>18 dysphoria, for example, and they -- well, okay.</p> <p>19 Let me back up for a second.</p> <p>20 We use gender -- the diagnosis of gender</p> <p>21 dysphoria to make medical decisions. Right? So</p> <p>22 a person that does not meet the diagnosis of</p> <p>23 gender dysphoria wouldn't require intervention.</p> <p>24 A person that does meet the criteria for gender</p> <p>25 dysphoria, I would want to know how does that</p>	<p style="text-align: right;">Page 40</p> <p>1 MR. SELDIN: Object to form.</p> <p>2 A I don't -- I don't really think I can -- I'm not</p> <p>3 really sure I understand.</p> <p>4 Q Well, you said "can be helpful." And I'm</p> <p>5 wondering -- okay. I'm still going back to my</p> <p>6 question. Is it always helpful? Is it an</p> <p>7 unassailable diagnostic tool?</p> <p>8 MR. SELDIN: Object to form.</p> <p>9 A Well, I certainly think that in treating</p> <p>10 transgender adolescents, the -- whether or not</p> <p>11 they meet criteria for gender dysphoria is an</p> <p>12 extremely helpful thing to know.</p> <p>13 Q Is it unassailable?</p> <p>14 MR. SELDIN: Object to form.</p> <p>15 A Can you define that.</p> <p>16 Q Is it always 100 percent right?</p> <p>17 MR. SELDIN: Object to form.</p> <p>18 A I don't think anything is 100 percent right in</p> <p>19 any aspect of medicine, but I think that the</p> <p>20 confidence that I have in, for example, the</p> <p>21 assessment that -- members of the</p> <p>22 multidisciplinary team that I work with I find to</p> <p>23 be extremely helpful in having really challenging</p> <p>24 conversations with patients and families about</p> <p>25 what the medical options might be.</p>

<p style="text-align: right;">Page 41</p> <p>1 Q So not always 100 percent right. What is the 2 error rate? 3 MR. SELDIN: Object to form. 4 A I think this is too abstract to answer in that 5 way. So I think, you know, if you could, be more 6 specific in, you know, a specific situation. 7 Q Doctor, all I'm asking is if you know if there is 8 an error rate for diagnosing gender dysphoria. 9 MR. SELDIN: Object to form. Asked and 10 answered. 11 A I don't have more -- a more precise answer or 12 number than I've already shared with you. 13 Q And what number is that? 14 MR. SELDIN: Object to form. 15 A I don't know what the error rate of diagnosis of 16 gender dysphoria is. What I do know is that 17 patients that have received -- that receive a 18 diagnosis of gender dysphoria and are treated 19 with gender-affirming care, I believe the error 20 rate or the rate of people that later on in the 21 future say, "Turns out I'm cisgender and I" -- 22 "Turns out I'm cisgender," is less than 1 23 percent. 24 MR. SELDIN: Tom -- Mr. Fisher, is now a 25 good time for a little mid-morning break or --</p>	<p style="text-align: right;">Page 43</p> <p>1 may -- if a child has a difference in gender 2 identity, they may or may not have any distress 3 associated with that. 4 But the percentage of young people who are 5 experiencing different degrees of gender identity 6 difference I don't know. 7 Q Let's just move into the range of adolescents. 8 Maybe let's take somebody -- the range of kids 9 from beginning of Tanner Stage 2 up through, I 10 guess, 15. Is that a useful range -- age range 11 in your mind? 12 MR. SELDIN: Object to form. 13 A Sure. 14 Q And I'm wondering, within that age range, do you 15 have a -- is there any data that shows or do you 16 have an estimate of percentage of transgenders 17 who do not experience gender dysphoria? 18 MR. SELDIN: Object to form. 19 A So there are some efforts to understand the 20 number of people that identify as transgender, 21 for example, in the United States today, and that 22 number seems to be somewhere below 1 percent and 23 above .5 percent. 24 Q Okay. 25 A And then the number of people then presenting to</p>
<p style="text-align: right;">Page 42</p> <p>1 MR. FISHER: Yeah. Sure. That's fine. 2 Let's go ahead and take a break. 3 (Recess taken from 9:57 a.m. to 10:02 a.m.) 4 BY MR. FISHER: 5 Q Doctor, I think you said that there are some who 6 are transgender that do not experience gender 7 dysphoria; is that accurate? 8 A I would agree. 9 Q So let's start with the preadolescents. About 10 how many preadolescents do you think -- or is 11 there evidence showing that are transgender but 12 not gender dysphoric? 13 MR. SELDIN: Object to form. 14 A I don't think I can give you a number. I think 15 what I would say is that gender identity 16 exploration is a normal function of childhood so 17 that -- you know, in childhood we're always 18 putting on different hats and exploring the world 19 around us and how we interact with that world. 20 So, you know, I think that the -- for 21 example, if a -- if a -- someone assigned male at 22 birth is experimenting with wearing different 23 types of clothes or different types of play, that 24 doesn't necessarily mean that they have a 25 difference in gender identity, for example. They</p>	<p style="text-align: right;">Page 44</p> <p>1 clinical care for gender dysphoria is much lower 2 than that -- than that figure. 3 Q What are your sources for those numbers? 4 A Let me think. So I think that there's been -- 5 there's a national survey in 2015 that was aiming 6 to understand the prevalence of gender identity 7 difference in the U.S. I think that there's 8 some -- some -- an effort to quantify the 9 percentage -- 10 Q Doctor, I'm sorry. You're breaking up. We're 11 having a hard time getting you. 12 A Sorry. Is that better? 13 Q Yes. I don't know where the problem was, but you 14 were starting to talk about what -- I was asking 15 what studies supported the numbers you were 16 mentioning, and so if we could just start there. 17 A Yeah. So the things that come to my mind are, I 18 think, a 2015 national transgender survey. I 19 believe there's been some work done in Minnesota, 20 if I'm not mistaken, trying to quantify the 21 percentage of young people that are identifying 22 as transgender, and so that's where I'm pulling 23 that number, somewhere between .5 and 1 percent, 24 from. 25 Q Okay. That 2015 survey, who was surveyed?</p>

<p style="text-align: right;">Page 45</p> <p>1 A Now I'm just trying to remember if that was the</p> <p>2 one that came up -- that did offer that</p> <p>3 percentage. But there is a 2015 survey of -- I</p> <p>4 think it's called the National Transgender</p> <p>5 Survey, I think, published by the Williams</p> <p>6 Institute, which was surveying people from across</p> <p>7 the U.S. and territories to learn more about the</p> <p>8 health and well-being of transgender Americans.</p> <p>9 Q How was that survey conducted?</p> <p>10 A If I recall, there was a recruitment strategy to</p> <p>11 try to identify a diverse sampling of transgender</p> <p>12 people from all 50 states and different</p> <p>13 territories, recruiting from medical clinics,</p> <p>14 from snowball sampling, from online</p> <p>15 advertisements, to try to identify more people</p> <p>16 from different parts of the country.</p> <p>17 Q And how was it conducted?</p> <p>18 A Surveys.</p> <p>19 Q No. But, I mean, was it mail? Telephone? What</p> <p>20 was it?</p> <p>21 A If I'm not mistaken, I think majority online, but</p> <p>22 there may have been some mail. I'm not a hundred</p> <p>23 percent on that.</p> <p>24 Q Are you familiar with any criticisms of that</p> <p>25 survey?</p>	<p style="text-align: right;">Page 47</p> <p>1 specifically as there's been more access to</p> <p>2 health intervention.</p> <p>3 Q Sorry.</p> <p>4 A I can just barely see the top of your head.</p> <p>5 Q Oh, I'm so sorry.</p> <p>6 Is that better?</p> <p>7 A Yes. Thank you.</p> <p>8 Q Okay. I can't see myself so I didn't really</p> <p>9 know.</p> <p>10 A You're like (indicating).</p> <p>11 MR. SELDIN: Don't deprive us of the view of</p> <p>12 that sharp tie, Mr. Fisher.</p> <p>13 BY MR. FISHER:</p> <p>14 Q I'm sorry. Were you finished with your answer,</p> <p>15 Doctor?</p> <p>16 A I think so, yes.</p> <p>17 Q Okay. So back to paragraph 28 of your</p> <p>18 declaration, if you could pull that up. I'm</p> <p>19 sorry. This is 4, right? Exhibit 4.</p> <p>20 And you'll recall earlier I read the first</p> <p>21 clause of that first sentence, and now I'm going</p> <p>22 to switch focus to the second clause, which says,</p> <p>23 "Attempts to force transgender people to align</p> <p>24 their gender identity with their birth sex</p> <p>25 (sometimes described as 'conversion therapy') have</p>
<p style="text-align: right;">Page 46</p> <p>1 MR. SELDIN: Object to form.</p> <p>2 A Not specifically.</p> <p>3 Q Okay. When, Doctor, in your understanding was</p> <p>4 the first teen gender clinic opened in the United</p> <p>5 States?</p> <p>6 MR. SELDIN: Object to form.</p> <p>7 A I want to say in the early 2000s.</p> <p>8 Q How many teens were diagnosed with gender</p> <p>9 dysphoria from 2000 to 2010?</p> <p>10 MR. SELDIN: Object to form.</p> <p>11 A I don't know the answer to that.</p> <p>12 Q How about the decade -- or 12 years, 2011 to</p> <p>13 2023?</p> <p>14 MR. SELDIN: Object to form.</p> <p>15 A I don't know the number of people diagnosed.</p> <p>16 Q Do you have any sense of the volume dynamic of</p> <p>17 that diagnosis over that time?</p> <p>18 MR. SELDIN: Object to form.</p> <p>19 A Sorry. Can you --</p> <p>20 Q I'm wondering if you have a sense of whether the</p> <p>21 volume of teen diagnosis with gender dysphoria</p> <p>22 has increased in those two decades.</p> <p>23 MR. SELDIN: Object to form.</p> <p>24 A There has been more -- more adolescents diagnosed</p> <p>25 with gender dysphoria in the last decade,</p>	<p style="text-align: right;">Page 48</p> <p>1 been found to be both harmful and ineffective."</p> <p>2 Do you see that?</p> <p>3 A I do. And I do believe that word was supposed to</p> <p>4 be "described." So sorry about that typo.</p> <p>5 Q No. That's okay. I was actually going to try to</p> <p>6 fix it for you, but then I couldn't figure out if</p> <p>7 it was "decried" or "described." So I thought</p> <p>8 I'd let you do it. Okay. Thank you.</p> <p>9 And then you cite -- later in the paragraph</p> <p>10 you cite Turban 2020a, right? Do I have that --</p> <p>11 right. Turban 2020a. Campbell 2002, but I think</p> <p>12 that may be actually 2022.</p> <p>13 A Okay.</p> <p>14 Q And in Fish, you say 2022, but might actually be</p> <p>15 2020. I got those dates just, I think, from your</p> <p>16 bibliography.</p> <p>17 Anyway, you're with me, though? Yes?</p> <p>18 A I'm with you.</p> <p>19 Q Okay. So let's start with that Turban study.</p> <p>20 So this is Exhibit 5. Let's go ahead and</p> <p>21 pull that up.</p> <p>22 (Shumer Exhibit 5 marked.)</p> <p>23 MR. FISHER: I'm sorry. Turban -- JAMA</p> <p>24 Psychiatry, Association Between Recalled</p> <p>25 Exposure. There we go.</p>

<p style="text-align: right;">Page 49</p> <p>1 BY MR. FISHER:</p> <p>2 Q So, Doctor, you see what's on the screen. Is</p> <p>3 that the Turban study that you cite there in</p> <p>4 paragraph 28?</p> <p>5 A Yes.</p> <p>6 Q So just tell me what this paper is purporting to</p> <p>7 tell us overall broadly.</p> <p>8 MR. SELDIN: Object to form.</p> <p>9 A So I think I cited this paper as I was discussing</p> <p>10 the concept that attempts to change someone's</p> <p>11 gender identity using psychotherapy isn't helpful</p> <p>12 and this is -- the study I cited because it</p> <p>13 looks -- it's trying to answer that question by</p> <p>14 looking at adults and then getting a history of</p> <p>15 their exposure or non-exposure to these types of</p> <p>16 conversion efforts.</p> <p>17 Q I'm sorry. Let's start with that "conversion</p> <p>18 efforts." What, I guess, do the paper's authors,</p> <p>19 and I assume you, mean by that term?</p> <p>20 A So I think starting with the paper, you know, I</p> <p>21 think that -- I don't know what the exact</p> <p>22 question was, and I don't recall the exact</p> <p>23 question that was asked of the subjects. I do</p> <p>24 believe that the data that came -- that was used</p> <p>25 in this paper was based on that national</p>	<p style="text-align: right;">Page 51</p> <p>1 really challenging research study to ask --</p> <p>2 right? -- because you can't -- we can't do what</p> <p>3 we call a randomized controlled trial. So if you</p> <p>4 think of, you know, trying to see if -- if a new</p> <p>5 antibiotic works better than the old one, you can</p> <p>6 set up what we call a randomized controlled trial</p> <p>7 where you have a hundred patients, 50 of them get</p> <p>8 randomized to group 1, 50 of them get randomized</p> <p>9 to group 2, and then they all get either drug A</p> <p>10 or drug B, and they don't know which one they're</p> <p>11 getting, and then at the end you see who does</p> <p>12 better. And if group A does better, then the new</p> <p>13 drug is better than the old drug.</p> <p>14 Now, that's a really awesome way to do</p> <p>15 research because the only variable there is which</p> <p>16 drug you've got. So that's very controlled, and</p> <p>17 that would be what we consider in the terms of</p> <p>18 medical literature very high quality.</p> <p>19 Now let's try to answer this question using</p> <p>20 a randomized -- a randomized study like that.</p> <p>21 Take 100 people and say, you know, these 50 are</p> <p>22 going to get therapy to try to change their</p> <p>23 gender identity. These people are going to get</p> <p>24 supportive therapy. And then 20 years from now</p> <p>25 let's see -- let's measure their lifetime suicide</p>
<p style="text-align: right;">Page 50</p> <p>1 transgender healthcare survey. So there was a</p> <p>2 question in that survey asking participants</p> <p>3 whether or not they -- that they recall efforts</p> <p>4 to change their gender identity.</p> <p>5 And so I think that was -- that was what the</p> <p>6 author meant, is the participants' perception of</p> <p>7 that occurring in their life.</p> <p>8 Q Is there what's known in statistical analysis as</p> <p>9 a retrospective survey?</p> <p>10 MR. SELDIN: Object to form.</p> <p>11 A This is -- the survey type, yes, it's a</p> <p>12 retrospective.</p> <p>13 Q Survey type.</p> <p>14 A Yeah.</p> <p>15 Q And are retrospective surveys understood to be</p> <p>16 high quality or low quality?</p> <p>17 MR. SELDIN: Object to form.</p> <p>18 A Well, I think that a retrospective survey is</p> <p>19 extremely helpful in different ways. You know, I</p> <p>20 think when you say the word "quality," I'm</p> <p>21 reminded of the use in sort of lay terms but also</p> <p>22 in sort of medical literature terms. Right?</p> <p>23 So that when you're -- when we're talking</p> <p>24 about a retrospective study of, for example,</p> <p>25 recalled conversion efforts, you know, that's a</p>	<p style="text-align: right;">Page 52</p> <p>1 attempt.</p> <p>2 So you couldn't do that study obviously --</p> <p>3 right? -- because, first of all, you would know</p> <p>4 which group you're in because you're the one</p> <p>5 getting the therapy.</p> <p>6 Number two, no one would sign up for that</p> <p>7 study because there's not what we call equipoise.</p> <p>8 There's -- people in the study wouldn't believe</p> <p>9 that both options were equally effective. And</p> <p>10 then you wouldn't be able to, you know, likely</p> <p>11 conduct that study over long enough for it to be</p> <p>12 meaningful.</p> <p>13 So, granted, we can't do that study with a</p> <p>14 randomized controlled trial. We need to attack</p> <p>15 that question from a different way.</p> <p>16 So what Turban is doing here, he's saying</p> <p>17 this is a really complicated question. How can</p> <p>18 we get a sense for the answer to that question?</p> <p>19 One of the ways we can do it is we can do a</p> <p>20 retrospective study.</p> <p>21 And so, yes, there's the -- in a</p> <p>22 retrospective study you don't have that control</p> <p>23 where there's only that one variable. So it's</p> <p>24 not as neat and tidy. But, unfortunately, this</p> <p>25 question isn't so neat and tidy. And so that's</p>

<p style="text-align: right;">Page 53</p> <p>1 why this is a study designed that -- one of the</p> <p>2 study designs that can be used when answering</p> <p>3 more complicated questions like this.</p> <p>4 Q Well, who responded to this survey? Was it --</p> <p>5 did it include people who desisted from</p> <p>6 transgender or gender dysphoria?</p> <p>7 MR. SELDIN: Object to form.</p> <p>8 A Yeah. So I think that the -- you know, the</p> <p>9 recruitment of subjects is really well outlined</p> <p>10 in the -- in the original national transgender</p> <p>11 healthcare survey, but it was, as I said, people</p> <p>12 that currently identify as transgender adults.</p> <p>13 Q I see. So this doesn't include -- the response</p> <p>14 to the question about conversion, as you've put</p> <p>15 it, or as the paper puts it, is only among people</p> <p>16 who are transgender, not among people who might</p> <p>17 have been transgender at one time but no longer</p> <p>18 are?</p> <p>19 MR. SELDIN: Object to form.</p> <p>20 A Yes. This paper is asking this specific question</p> <p>21 in a group of transgender adults; what is the</p> <p>22 likelihood of suicide attempts based on exposure</p> <p>23 to conversion efforts.</p> <p>24 Q Well, so you've got a group of people for whom</p> <p>25 these so-called conversion efforts were</p>	<p style="text-align: right;">Page 55</p> <p>1 expert report -- right? -- I think the statement</p> <p>2 that I made is that -- was that attempts to force</p> <p>3 transgender people to align their gender identity</p> <p>4 with their birth sex have been found to be both</p> <p>5 harmful and ineffective. So this is an example</p> <p>6 of harmful.</p> <p>7 I'm not sure I've provided a citation for</p> <p>8 ineffective, but I -- I think that that -- that</p> <p>9 literature also exists. However, I'm not</p> <p>10 planning to be an expert in that particular</p> <p>11 question.</p> <p>12 Q Well, I mean, I guess this -- on the face of it,</p> <p>13 this paper suggests something about the impact on</p> <p>14 the people that responded to the survey of this</p> <p>15 so-called conversion therapy, but does it tell us</p> <p>16 anything about the effect on people who were not</p> <p>17 surveyed?</p> <p>18 MR. SELDIN: Object to form. Asked and</p> <p>19 answered.</p> <p>20 A So I think the question you're asking is a</p> <p>21 question about generalizability -- right? -- and</p> <p>22 this is a term that we use in all medical</p> <p>23 research. So, you know, why do I read this study</p> <p>24 in the first place? Probably because I'm</p> <p>25 thinking about a particular person or a</p>
<p style="text-align: right;">Page 54</p> <p>1 unsuccessful. What does that tell you about</p> <p>2 whether psychotherapy or other efforts were</p> <p>3 successful with other people?</p> <p>4 MR. SELDIN: Object to form.</p> <p>5 A I don't think that this paper is necessarily</p> <p>6 asking the question -- this paper isn't</p> <p>7 necessarily asking the question has anyone's</p> <p>8 gender identity been changed with quote/unquote,</p> <p>9 conversion therapy. It's asking a different</p> <p>10 question.</p> <p>11 It's asking in a group of transgender</p> <p>12 adults, currently identifying as transgender,</p> <p>13 what is the effect of conversion therapy,</p> <p>14 so . . .</p> <p>15 Q What is the effect of conversion therapy on</p> <p>16 people on whom it did not work?</p> <p>17 MR. SELDIN: Object to form.</p> <p>18 A What is -- what is the effect of -- on conversion</p> <p>19 therapy in people that are currently identifying</p> <p>20 as transgender adults.</p> <p>21 Q Well, I guess one would have -- well, I'm just</p> <p>22 trying to understand, what use can we make of</p> <p>23 this?</p> <p>24 MR. SELDIN: Object to form.</p> <p>25 A Well, I think that if we're going back to my</p>	<p style="text-align: right;">Page 56</p> <p>1 particular patient, and so I say, okay, this is</p> <p>2 what Turban, et al., found in people that are</p> <p>3 transgender adults that if they recall having had</p> <p>4 a conversion effort, as they put it in this</p> <p>5 article, that they did worse than if they didn't.</p> <p>6 So then I say, okay, well, that's</p> <p>7 interesting. How does that impact --</p> <p>8 Q Doctor, you're breaking up again.</p> <p>9 A -- the patient that I have in front of me. Is it</p> <p>10 generalizable to that person?</p> <p>11 Q Right. Right.</p> <p>12 A So then I say, okay, that's interesting. So how</p> <p>13 does that relate to the person I have in front of</p> <p>14 me? Is it generalizable?</p> <p>15 Well, the person I have in front of me may</p> <p>16 be a 13-year-old adolescent. And I say, well, is</p> <p>17 this generalizable or not? I think it's</p> <p>18 potentially generalizable because that person</p> <p>19 will become an adult, that the -- if the person</p> <p>20 currently has gender dysphoria and has, you know,</p> <p>21 consistent persistent gender identity different</p> <p>22 than the sex they were assigned at birth, then</p> <p>23 the person is very likely to continue to identify</p> <p>24 that way as an adult.</p> <p>25 And so would I suggest efforts to change</p>

<p style="text-align: right;">Page 57</p> <p>1 their gender identity? Based on this paper, I</p> <p>2 would give pause to that because it seems like</p> <p>3 there's a risk of worse mental health outcomes in</p> <p>4 that situation.</p> <p>5 Q Okay. So let's look at Exhibit 6.</p> <p>6 (Shumer Exhibit 6 marked.)</p> <p>7 Q This is Conversion Therapy, Suicidality, and</p> <p>8 Running Away. There we go. Good.</p> <p>9 So, Doctor, is this the paper that the</p> <p>10 Fish -- I'm sorry -- the Campbell paper that you</p> <p>11 cited in paragraph 28?</p> <p>12 A Yes.</p> <p>13 Q Now, I notice that the copy that we have here for</p> <p>14 exhibit purposes says "Preprint not peer</p> <p>15 reviewed," and that's just because that's what we</p> <p>16 found.</p> <p>17 Are you aware whether this paper has since</p> <p>18 been peer reviewed?</p> <p>19 A I am not sure.</p> <p>20 Q Have you -- when you read this paper, did you</p> <p>21 read it with this stamp across the front that</p> <p>22 says "Preprint not peer reviewed," or did you</p> <p>23 read something else?</p> <p>24 A I don't recall there being a stamp across it like</p> <p>25 you're showing me right now, no.</p>	<p style="text-align: right;">Page 59</p> <p>1 over?</p> <p>2 Q Of course.</p> <p>3 A Okay. Thank you.</p> <p>4 Q Yes.</p> <p>5 A I'm sorry. Can you repeat.</p> <p>6 Q Yeah. My question was what type of study this</p> <p>7 was. Was it another retrospective survey?</p> <p>8 A Yes. And, again, using data from the 2015 U.S.</p> <p>9 Transgender Survey.</p> <p>10 Q And so -- okay. I think that's probably my only</p> <p>11 questions on that one.</p> <p>12 (Shumer Exhibit 7 marked.)</p> <p>13 Q Let's move to Exhibit 7, which is Sexual</p> <p>14 Orientation and Gender Identity Change Efforts.</p> <p>15 There we go.</p> <p>16 Doctor, is this the Fish article that you</p> <p>17 cite in paragraph 28?</p> <p>18 A Yes, I believe so. Yes.</p> <p>19 Q So this -- it says at the top "Editorials." Is</p> <p>20 this just an editorial opinion?</p> <p>21 MR. SELDIN: Object to form.</p> <p>22 A Let's see here. So I'm trying to put myself back</p> <p>23 in my shoes writing my expert report. The Fish,</p> <p>24 et al., citation has -- was an effort for me to</p> <p>25 find a consolidated source where I was</p>
<p style="text-align: right;">Page 58</p> <p>1 Q Oh, okay. Were you aware when you read it that</p> <p>2 it had not been peer reviewed?</p> <p>3 MR. SELDIN: Object to form.</p> <p>4 A I believe I was, but I'm not certain about that.</p> <p>5 Q Did that give you any concern about relying on it</p> <p>6 in your expert report?</p> <p>7 MR. SELDIN: Object to form.</p> <p>8 A I don't recall knowing or thinking about its peer</p> <p>9 review status in writing my report.</p> <p>10 Q Well, I guess I'm just sort of wondering, does</p> <p>11 peer review status matter to you when you were</p> <p>12 putting together your expert report and relying</p> <p>13 on scientific papers?</p> <p>14 MR. SELDIN: Object to form.</p> <p>15 A It certainly does, but in this situation I just</p> <p>16 don't recall whether I knew it was peer reviewed</p> <p>17 or not.</p> <p>18 Q Okay. So let's talk about what kind of a study</p> <p>19 this is. Is this another retrospective survey?</p> <p>20 A I'm sorry. I'm going to move a little closer to</p> <p>21 the screen so I can see.</p> <p>22 Q Oh, sure.</p> <p>23 MR. FISHER: Maybe we could just make it a</p> <p>24 little bigger, Shawn.</p> <p>25 A Can you give me a second to read the abstract</p>	<p style="text-align: right;">Page 60</p> <p>1 demonstrating that the American Medical</p> <p>2 Association, the American Academy of Pediatrics,</p> <p>3 American Psychiatric Association, and American</p> <p>4 Psychological Association do not endorse efforts</p> <p>5 to try to change someone's gender identity.</p> <p>6 So this does appear to be an editorial, and</p> <p>7 perhaps I could have -- or should have found</p> <p>8 individual citations for each of those</p> <p>9 organizations. But this was my effort to put a</p> <p>10 citation in the report along the lines of just</p> <p>11 demonstrating that these associations and</p> <p>12 academies have an opinion about this topic.</p> <p>13 MR. SELDIN: And, Mr. Fisher, just for the</p> <p>14 record --</p> <p>15 MR. FISHER: I'm sorry. You're breaking up.</p> <p>16 COURT REPORTER: I need it to start from the</p> <p>17 beginning. Sorry.</p> <p>18 MR. SELDIN: Sorry. A squirrel somewhere</p> <p>19 walked across the Internet line.</p> <p>20 I was just telling Mr. Fisher, for the</p> <p>21 benefit of the record, that the document</p> <p>22 Dr. Shumer is looking at, at the table, is the</p> <p>23 as-filed copy of his declaration that I said he</p> <p>24 had in front of him.</p> <p>25 MR. FISHER: Oh, okay. It's no different</p>

<p style="text-align: right;">Page 61</p> <p>1 from the one on the screen, though, in terms of</p> <p>2 content?</p> <p>3 MR. SELDIN: No. I'm saying he's looking at</p> <p>4 a different document on the table. He's looking</p> <p>5 at his declaration --</p> <p>6 MR. FISHER: Oh.</p> <p>7 MR. SELDIN: -- to clarify how he's using</p> <p>8 this editorial.</p> <p>9 MR. FISHER: Fair enough. Fair enough.</p> <p>10 Thank you. Okay.</p> <p>11 BY MR. FISHER:</p> <p>12 Q So, Doctor, is there any science in this</p> <p>13 editorial?</p> <p>14 MR. SELDIN: Object to form.</p> <p>15 A I would not classify this as a research study. I</p> <p>16 think the citation in the expert report is --</p> <p>17 isn't science either. It's just a statement of</p> <p>18 where the American Medical Association, the</p> <p>19 American Academy of Pediatrics, the American</p> <p>20 Psychiatric Association, and the American</p> <p>21 Psychological Association stand with respect to</p> <p>22 efforts to change someone's gender identity using</p> <p>23 psychotherapy.</p> <p>24 Q Are you aware of any peer-reviewed studies</p> <p>25 showing that what you and Turban call conversion</p>	<p style="text-align: right;">Page 63</p> <p>1 medical associations that I know and respect, who</p> <p>2 have done more work than me trying to answer that</p> <p>3 question, have come to the conclusion that, no,</p> <p>4 it is not safe or effective.</p> <p>5 Q When you are writing paragraph 28 of your report,</p> <p>6 did you look for studies demonstrating that what</p> <p>7 you call conversion therapy is unsuccessful?</p> <p>8 MR. SELDIN: Object to form.</p> <p>9 A I don't recall if I -- what my search strategy</p> <p>10 was. I think that I went into writing my report</p> <p>11 knowing the stance of these four associations</p> <p>12 that I respect and wanted to include that in my</p> <p>13 report to make this point and didn't -- I don't</p> <p>14 recall other -- other search efforts that I did</p> <p>15 in writing this particular paragraph.</p> <p>16 Q Have you ever searched for peer-reviewed studies</p> <p>17 showing that what you call conversion therapy is</p> <p>18 unsuccessful?</p> <p>19 MR. SELDIN: Object to form.</p> <p>20 A I think the way that you're asking the question</p> <p>21 is interesting -- right? -- because you're saying</p> <p>22 search for studies that say conversion therapy is</p> <p>23 successful. That's --</p> <p>24 Q No. Unsuccessful. Unsuccessful.</p> <p>25 A Unsuccessful. So I wouldn't say that's how</p>
<p style="text-align: right;">Page 62</p> <p>1 therapy is unsuccessful?</p> <p>2 MR. SELDIN: Object to form.</p> <p>3 A I could not provide a study that asks that</p> <p>4 particular question. I believe it exists, but I</p> <p>5 wouldn't -- I wouldn't suggest that, you know,</p> <p>6 the -- psychological approach to gender identity</p> <p>7 is the area of medicine that I am the most -- the</p> <p>8 most expert in as a pediatric endocrinologist.</p> <p>9 Q Are you expert in it at all?</p> <p>10 MR. SELDIN: Object to form.</p> <p>11 A I think that certainly working with -- working as</p> <p>12 part of a multi-disciplinary team, treating kids</p> <p>13 with gender dysphoria, I consider myself an</p> <p>14 expert in gender dysphoria.</p> <p>15 Q But what about the psychological aspect?</p> <p>16 MR. SELDIN: Object to form.</p> <p>17 A Regarding the question does efforts to change</p> <p>18 someone's gender identity using psychotherapy --</p> <p>19 is that safe and effective -- I am familiar with</p> <p>20 the literature that I presented in my expert</p> <p>21 report, and my understanding of literature not</p> <p>22 cited is that -- that it is not safe or</p> <p>23 effective.</p> <p>24 But I -- without having more citations, some</p> <p>25 of that statement comes from the fact that these</p>	<p style="text-align: right;">Page 64</p> <p>1 anyone searches for anything. Right? That the</p> <p>2 question is what do we know about conversion</p> <p>3 therapy? So you don't go into a search, you</p> <p>4 know, having your answer before you have the</p> <p>5 study. Right?</p> <p>6 So in my searching for information on the</p> <p>7 safety and efficacy of conversion therapy, this</p> <p>8 is what I came up with. What I didn't do is I</p> <p>9 didn't say, "Give me papers that say conversion</p> <p>10 therapy is successful. Now give me papers that</p> <p>11 say conversion therapy is unsuccessful, and let</p> <p>12 me read both of those." Right?</p> <p>13 The search is: What is the effect of</p> <p>14 conversion therapy? And when I ask that question</p> <p>15 in preparation for my expert report, these are</p> <p>16 the materials that I -- that I discovered.</p> <p>17 Q Okay. Fair enough. What is the etiology of</p> <p>18 transgenderism?</p> <p>19 MR. SELDIN: Object to form.</p> <p>20 A Gender identity diversity is sort of a normal</p> <p>21 form of human diversity, I would say similar to</p> <p>22 other elements of human diversity. For example,</p> <p>23 sexual orientation is another, you know, form of</p> <p>24 human diversity. And in these very complicated</p> <p>25 elements of personhood, you know, there's</p>

<p style="text-align: right;">Page 65</p> <p>1 probably a lot of factors that goes into 2 someone's gender identity, that we -- we do have 3 some suggestions about what some of those are. 4 And to be honest, we don't have the full picture, 5 but we understand that there are certain biologic 6 elements that can contribute to one's gender 7 identity. 8 Those things seem to involve differences in 9 genetics, differences in potential hormone 10 exposures in fetal life and other -- other 11 biological -- biologic influences that we may not 12 understand. 13 Q What about social influences? 14 MR. SELDIN: Object to form. 15 A I certainly think that our social world helps 16 to -- allows for people to put context to their 17 gender identity. 18 So, you know, if I was born on a desert 19 island and never had any exposure to any other 20 person, I might not have such a deep self-concept 21 of gender. But because I'm placed in the world 22 and interact with the world, I'm able to 23 understand myself in the world in lots of 24 different ways, including gender identity. 25 So I think it's -- it is unclear all of the</p>	<p style="text-align: right;">Page 67</p> <p>1 you're saying that if one's genetic parents had 2 some predisposition, that that could be passed on 3 to the children, but that still wouldn't explain 4 why the parents had it. Is that -- am I looking 5 at it the right way, or is there some other point 6 you're trying to get across? 7 MR. SELDIN: Object to form. 8 A Yeah. So I think that's boiling down genetics 9 into, you know, two sentences. But I would say 10 that, you know, all of us have hundreds of 11 thousands or millions of genes, and those genes 12 encode information that dictates how all of our 13 cells work and dictates, you know, why my eyes 14 are blue and Harper's are brown. 15 But, you know, I think when I -- when I'm 16 talking about genetics here, I'm thinking about 17 how these genetic differences may have some 18 impact on one's gender identity. 19 And so, you know, I think that I use the 20 example of twin studies because, you know, what 21 we don't have is -- you know, there are certain 22 genes that have a very obvious function, and that 23 function is only one thing. Right? So if you 24 have -- if you have a gene mutation for 25 Huntington's disease, you're going to have</p>
<p style="text-align: right;">Page 66</p> <p>1 elements that impact someone's gender identity or 2 that -- not impact but that are -- that 3 contribute to one's gender identity. 4 I think of social impacts more as helpful in 5 putting context to one's gender identity. 6 Q If you were born on a desert island and there was 7 nobody around and you didn't know, therefore, 8 about your gender identity, would you be still be 9 able to discern your sex? 10 MR. SELDIN: Object to form. 11 A Yeah. You know, I think that if I was born on a 12 desert island and no one else was around, I would 13 just know me. Right? So I wouldn't know that 14 there was any diversity in any human 15 characteristics. So I wouldn't have any 16 self-concept of sex, gender, or anything else. 17 Q Notwithstanding that, would you still have sex 18 organs? 19 MR. SELDIN: Object to form. 20 A I presume that I would. 21 Q Great. So you mentioned on the biological 22 influences -- well, first, let's talk about 23 genetic because I want to make sure I understand 24 what you mean by that. 25 I guess my very simple take on it is that</p>	<p style="text-align: right;">Page 68</p> <p>1 Huntington's disease. 2 But other things are much more variable. 3 Right? So height isn't just one gene. It's 4 probably a whole host of genes working together 5 as a team to impact how the body works. 6 So some of those more complex human 7 characteristics that do have to do with genetics 8 have to do with genetics and in not so much one a 9 gene/one effect sort of way. 10 So oftentimes when you're trying to say, 11 like, well, how much are -- is genetics itself 12 contributing, you might think to look at twin 13 studies because identical twins share all the 14 same genes. And so while it doesn't answer the 15 question about which genes, you know, you can use 16 those types of studies to understand if there's a 17 genetic impact on a human characteristic. 18 Q And so are there such studies suggesting some 19 genetic connection to being transgender? 20 MR. SELDIN: Object to form. 21 A There are studies looking at twin pairs with a 22 question about, you know, concurrence of their 23 gender identity. 24 Q Do you cite those studies in your expert report? 25 A I believe so. I'd have to go back and refresh my</p>

<p style="text-align: right;">Page 69</p> <p>1 memory.</p> <p>2 Q Can you just leaf through quickly and let me know</p> <p>3 because I think -- I want to make sure I</p> <p>4 understand which studies we're talking about.</p> <p>5 A You know, I'm not sure now that I'm reading --</p> <p>6 I'm reading paragraph 29, which I think is the</p> <p>7 paragraph where I'm sort of talking about</p> <p>8 biologic determinants of gender identity, and I'm</p> <p>9 not want sure that I cited a twin study in this</p> <p>10 report.</p> <p>11 Q Why not?</p> <p>12 A Because my expert report isn't able to cite all</p> <p>13 of the volumes of evidence regarding all of the</p> <p>14 biologic factors of -- biologic impact of gender</p> <p>15 identity but was intended to be a helpful review.</p> <p>16 Q Excuse me. One second.</p> <p>17 MR. SELDIN: Dr. Shumer, you've silenced</p> <p>18 Mr. Fisher with your brilliance.</p> <p>19 MR. FISHER: Now you've done it. All right.</p> <p>20 BY MR. FISHER:</p> <p>21 Q All right. Well, let's take a look at Exhibit 8</p> <p>22 which is, I think, the Chung study. I think this</p> <p>23 should -- yes.</p> <p>24 Is this the Chung study that you cite in</p> <p>25 paragraph 29?</p>	<p style="text-align: right;">Page 71</p> <p>1 break.</p> <p>2 MR. FISHER: Okay. That's fine.</p> <p>3 MR. SELDIN: We'll just -- he hasn't had an</p> <p>4 opportunity to review the whole thing, and it's</p> <p>5 kind of hard on the screen, so --</p> <p>6 MR. FISHER: Yeah.</p> <p>7 MR. SELDIN: -- before he says what's in or</p> <p>8 not in the paper and he hasn't had a chance to</p> <p>9 review, if you want to follow up on that question</p> <p>10 after a break, maybe we can have him look more</p> <p>11 thoroughly.</p> <p>12 MR. FISHER: Yeah. That's a good idea.</p> <p>13 MR. SELDIN: Yeah. Just maybe shoot me an</p> <p>14 e-mail with the particular exhibit number, and we</p> <p>15 can still go back after the next break, if you</p> <p>16 want to.</p> <p>17 MR. FISHER: All right. It's Exhibit 8.</p> <p>18 Razi, can you do that?</p> <p>19 MR. LANE: I will do that.</p> <p>20 A I am seeing -- okay. Yeah. I mean, I think as</p> <p>21 you said, this is a very dense paper. So, you</p> <p>22 know, I'm seeing in the first -- the first</p> <p>23 paragraph here, "Differences in the size of the</p> <p>24 human BSTc have been related to the gender</p> <p>25 identity disorder transsexuality, in which</p>
<p style="text-align: right;">Page 70</p> <p>1 (Shumer Exhibit 8 marked.)</p> <p>2 A Yes.</p> <p>3 Q Okay. And, you know, I did the best I could to</p> <p>4 make it through this, but I'm wondering if you</p> <p>5 could just show me where it says that there are</p> <p>6 similar brain structures between trans women and</p> <p>7 ciswomen.</p> <p>8 A Well, I can't read the words because that's too</p> <p>9 small.</p> <p>10 MR. FISHER: Yeah. Let's blow it up a</p> <p>11 little bit, if we could.</p> <p>12 A So I'm not seeing it on the words that I'm</p> <p>13 reading right now. If the -- if the cited paper</p> <p>14 doesn't have that specific language, then there</p> <p>15 may be a miscitation, but I'm not sure I can</p> <p>16 answer your question.</p> <p>17 MR. SELDIN: Dr. Shumer, do you want to</p> <p>18 go -- would it be helpful to go through the whole</p> <p>19 report or --</p> <p>20 THE WITNESS: This particular paper?</p> <p>21 MR. SELDIN: Yeah.</p> <p>22 THE WITNESS: Probably.</p> <p>23 MR. FISHER: Harper, do you have it?</p> <p>24 MR. SELDIN: I mean, I could probably pull</p> <p>25 it up for him, but maybe that's better to do at a</p>	<p style="text-align: right;">Page 72</p> <p>1 subjects voice the strong feeling of being born</p> <p>2 in the wrong sex. In male-to-female transsexuals</p> <p>3 the BSTc was similar in size to that of control</p> <p>4 women, whereas in the only female-to-male</p> <p>5 transsexual studied so far, the BSTc was similar</p> <p>6 to that -- in size to that of control men."</p> <p>7 You know, I think that what I wanted to just</p> <p>8 point out is that this, obviously, is a very</p> <p>9 complicated neurosurgical paper talking about</p> <p>10 nuclei of the brain. And nuclei are just sort of</p> <p>11 areas of neurons. And it is very clear --</p> <p>12 very -- what do I want to say? I do not claim to</p> <p>13 be a neuroscientist and don't even know what some</p> <p>14 of these, you know -- what some of these nuclei</p> <p>15 do in terms of neuro function.</p> <p>16 The point of citing this paper is that while</p> <p>17 we don't understand why these nuclei may or may</p> <p>18 not be aligning more with gender identity than</p> <p>19 sex assigned at birth, that there is some data to</p> <p>20 suggest that it does.</p> <p>21 Does this answer the question of why someone</p> <p>22 has one gender identity versus another? I'm</p> <p>23 not -- I'm not purporting that it does.</p> <p>24 But, you know, I think that in some of these</p> <p>25 very complicated and complex human</p>

<p style="text-align: right;">Page 73</p> <p>1 characteristics, like gender identity, you know, 2 when we don't have a complete understanding of 3 the etiology of one's gender identity, there's, 4 you know -- there's a scientific search for some 5 of those answers.</p> <p>6 Some of that searching has led to some of 7 this neuroscientific data, and so its 8 incorporation in the expert report, I don't want 9 to overstate that I -- that I know why these 10 nuclei are bigger or smaller in men and women and 11 trans people and, et cetera, but just to sort of 12 highlight that there's -- there are biologic 13 differences that are measurable in people with 14 different gender identities.</p> <p>15 BY MR. FISHER:</p> <p>16 Q Is there overlap between the size of the stria 17 terminalis between males and females?</p> <p>18 MR. SELDIN: Object to form.</p> <p>19 A Absolutely.</p> <p>20 Q Can one determine the biological sex of an 21 individual by looking at the size of that 22 structure?</p> <p>23 MR. SELDIN: Object to form.</p> <p>24 A You can't. And, you know, this is sort of 25 similar to what I -- how I would describe, like,</p>	<p style="text-align: right;">Page 75</p> <p>1 people and natal sex?</p> <p>2 MR. SELDIN: Object to form.</p> <p>3 A No, I don't think so. I think that was just to 4 explain why you can't use the size of a nuclei to 5 tell someone's sex assigned at birth. That was 6 just sort of a --</p> <p>7 Q Oh.</p> <p>8 A -- a way that I like to think about it.</p> <p>9 Q Okay. Are you familiar with neuronal plasticity?</p> <p>10 A I think I'm familiar with the term. I have a 11 concept of what that means, yes.</p> <p>12 Q What's your understanding of what it means?</p> <p>13 A How our brain changes over time.</p> <p>14 Q Do we -- is it possible that there are social or 15 environmental effects that can change the 16 appearance of the stria terminalis?</p> <p>17 MR. SELDIN: Object to form.</p> <p>18 A I don't know the answer to that question.</p> <p>19 Q Okay. Let's go on to Exhibit 9, which is the 20 Savic study, Sex Dimorphism. 21 (Shumer Exhibit 9 marked.)</p> <p>22 Q And, Doctor, similar to the last report, I just 23 need your help here. Show me where this study 24 shows the -- a biological connection to 25 transgenderism.</p>
<p style="text-align: right;">Page 74</p> <p>1 human height. Right? So that you have certainly 2 biologic impact on height, and also people 3 assigned male at birth on average are taller than 4 people assigned female at birth, and there's 5 overlap.</p> <p>6 So if you tell me the height of a person, I 7 cannot tell you if that person is assigned male 8 or female at birth. But because there's 9 differences in those bell-shaped curves that do, 10 in fact, overlap, that we can then ascertain that 11 there is a biologic effect on human height.</p> <p>12 In a similar way, as I understand it, 13 specific nuclei have different sizes in people 14 assigned male and female at birth. Similarly to 15 height, there's overlap in those bell-shaped 16 curves, that you can't tell me the size of 17 someone's specific nuclei and then I can tell you 18 what sex they're assigned at birth. And that 19 being said, that there seems to be some data that 20 gender -- that people with differences of gender 21 identity may have nuclei size more akin to their 22 sex assigned at birth.</p> <p>23 Q Is there -- with your height analogy, is there an 24 analogous, I guess, collateral inference to the 25 comparisons you're making -- or between trans</p>	<p style="text-align: right;">Page 76</p> <p>1 THE WITNESS: Can you zoom in a little bit 2 more on the abstract there.</p> <p>3 Thank you.</p> <p>4 MR. SELDIN: And, Mr. Fisher, while 5 Dr. Shumer reads, what do you think about 6 breaking a little bit after the hour just for a 7 couple minutes?</p> <p>8 MR. FISHER: Yeah, I was thinking the same 9 thing. Thanks.</p> <p>10 MR. SELDIN: All right.</p> <p>11 MR. FISHER: I'd like to get through this 12 line of questioning first, but then we can.</p> <p>13 MR. SELDIN: No. I won't hold you to the 14 exact minute. And Dr. Shumer can go all day, but 15 I will need a break.</p> <p>16 A Thank you.</p> <p>17 Yeah. So this paper is comparing different 18 brain parts in postmortem analysis in 19 heterosexual men, heterosexual women, and trans 20 women. And it -- and as you pointed out, this is 21 very dense and, you know, some of the 22 neuroscience is, of course, not in my wheelhouse.</p> <p>23 I think that the authors are showing that in 24 some parts of the brain the -- the size was more 25 similar to the sex assigned at birth. In other</p>

<p style="text-align: right;">Page 77</p> <p>1 parts, it differed from both the sex assigned at 2 birth and cisgender women.</p> <p>3 Again, what that means, I don't think that I 4 nor the author is going far enough to say, you 5 know, that the size of the hippocampus, for 6 example, is -- indicates your gender identity.</p> <p>7 I merely included this article to 8 demonstrate that there are, you know, seemingly 9 certain parts of the brain that are more similar 10 to people with the same sex assigned at birth and 11 other parts which may differ. And so I included 12 this to sort of build on that statement.</p> <p>13 BY MR. FISHER:</p> <p>14 Q So you think that this is a -- this shows that 15 there's a biological connection?</p> <p>16 MR. SELDIN: Object to form.</p> <p>17 A So the statement in my expert report is that 18 gender identity has a biological foundation, and 19 well, certainly brain anatomy studies are not -- 20 not -- not so open and shut that, you know, if 21 you're transgender you're -- this part of the 22 brain all of a sudden appears, you know. It's 23 not that simple.</p> <p>24 But there does seem to be some biologic 25 associations between some of these brain</p>	<p style="text-align: right;">Page 79</p> <p>1 in the abstract -- so two-thirds of the way down, 2 "MtF-TR displayed also singular features and 3 differed from both control groups by having 4 reduced thalamus and putamen volumes and elevated 5 GM volumes in the right insular and inferior 6 frontal cortex and an area covering the right 7 angular gyrus."</p> <p>8 So it's saying that this group differed from 9 the two control groups in these specific areas. 10 Again, not saying that, aha, this -- the size of 11 your right insular and inferior frontal cortex is 12 the -- that's the gender -- the gender identity 13 answer right there. It's included to build on 14 the rest of the literature surrounding biologic 15 foundation of gender identity.</p> <p>16 Q Well, do you see the next sentence. "The present 17 data do not support the notion that brains of 18 MtF-TR are feminized."</p> <p>19 What is that sentence saying?</p> <p>20 A So I think that their conclusion of all of these 21 different things led them to that statement. So 22 there's some parts that are more similar and 23 other parts that are different.</p> <p>24 So, you know, I -- I can't -- I don't feel 25 comfortable going into more detail about what all</p>
<p style="text-align: right;">Page 78</p> <p>1 anatomy -- some of this brain anatomy and gender 2 identity.</p> <p>3 Q Can you conclude from this study that brain 4 anatomy causes transgenderism?</p> <p>5 MR. SELDIN: Object to form.</p> <p>6 A No. I use it as an example to support the notion 7 that gender identity has a strong biologic 8 foundation.</p> <p>9 Q Strong biologic foundation. This shows that 10 there is a strong biologic foundation. I guess I 11 don't really understand what that means.</p> <p>12 Do we know that there's a biologic 13 foundation from this study?</p> <p>14 A I don't -- I think this study is one of the 15 multiple studies that contribute to our 16 understanding of the biologic foundation of 17 gender identity. That's why I included it in my 18 report.</p> <p>19 Q Doctor, and I don't -- I'd really like to just 20 highlight in my own copy the relevant passage. 21 If you could just tell me where the relevant 22 passage is in this paper so I can highlight it, 23 just for my own utility.</p> <p>24 A Okay. Well, you know, one thing -- one part that 25 I would -- if you scroll back up. You know, just</p>	<p style="text-align: right;">Page 80</p> <p>1 these findings mean. Just to say that there 2 are -- there were some findings in this 3 particular study showing differences in the study 4 group compared to the control groups, and that's 5 why I included it in my report.</p> <p>6 Q Do you think that the authors were wrong in the 7 abstract when they say "The present data do not 8 support the notion that brains of MtF-TR are 9 feminized?"</p> <p>10 MR. SELDIN: Object to form.</p> <p>11 A I'm not -- I don't want to discredit the authors. 12 I'm just including it in my report based on 13 information that's contained in the paper 14 similar -- such as what we highlighted above.</p> <p>15 Q Based on your understanding of this paper, do you 16 agree with that sentence, "The present data do 17 not support the notion that brains of MtF-TR are 18 feminized"?</p> <p>19 MR. SELDIN: Object to form.</p> <p>20 A I'm not agreeing nor disagreeing. I'm just 21 pointing out that there are some studies showing 22 brain differences in transgender people.</p> <p>23 Q Well, but why didn't you mention this finding -- 24 this conclusion in your report?</p> <p>25 MR. SELDIN: Object to form.</p>

<p style="text-align: right;">Page 81</p> <p>1 A There are certainly lots of brain anatomy that is 2 unrelated to gender identity. Right? And more 3 to learn about brain -- brain anatomy differences 4 amongst males and females and people with 5 differences in gender identity. 6 As you said at the beginning of our 7 interaction, you know, is there a brain test 8 study that you can do to determine someone's 9 gender identity? And the answer is no. 10 Does there seem to be some data to suggest 11 some differences? In my review of the 12 literature, the answer seems to be yes. 13 Q But not in this paper? 14 MR. SELDIN: Object to form. 15 A In this paper, I'm seeing several instances where 16 they had -- that they have brain structures that 17 they say were more similar to the people with the 18 same assigned sex at birth and others where 19 there's -- where there's differences. So I think 20 that the -- the conclusion of the authors is 21 trying to summarize that. 22 In the course of reading the paper, I 23 included it in my report, not, again, to say that 24 this is -- this brain structure is the answer to 25 gender identity but to point out that there does</p>	<p style="text-align: right;">Page 83</p> <p>1 before lunch then. 2 MR. SELDIN: Great. Why don't we come back 3 at 11:15. 4 MR. FISHER: Awesome. Thanks. 5 MR. SELDIN: Thank you. 6 (Recess taken from 11:09 a.m. to 11:15 a.m.) 7 BY MR. FISHER: 8 Q So let's turn now to Exhibit 10, the Luders 9 study, "Regional gray matter variation in 10 male-to-female transsexualism." 11 (Shumer Exhibit 10 marked.) 12 Q Okay. Doctor, this is another one of the studies 13 cited in paragraph 29 of your report? 14 A Okay. Yep. 15 Q Okay. And what is this study purporting to tell 16 us? 17 MR. SELDIN: Object to form. 18 A Well, I think, similarly, a discussion of very 19 specific brain findings that show measurable 20 differences that seem to be more aligned with 21 gender identity than sex assigned at birth. 22 Q So if you would look, please, at page 4, the 23 first paragraph there under "Discussion." I'm 24 sorry. Not that one. The next paragraph, where 25 it says "Further research."</p>
<p style="text-align: right;">Page 82</p> <p>1 seem to be some differences related to gender 2 identity. 3 Q Did you not include the sentence that "The 4 present data do not support the notion that 5 brains of MtF-TR are feminized" because that 6 sentence didn't support your conclusion? 7 MR. SELDIN: Object to form. 8 A I think my conclusion that gender identity has 9 biologic foundation is based on a myriad of 10 different sources that I've tried to include at 11 least some of in my report and that -- that my -- 12 that my use of citing this paper specifically was 13 an attempt to point that out. 14 But I didn't get as -- you know, obviously 15 there's -- one, two, three -- four citations at 16 the end of that sentence, so I didn't get as 17 granular as you're describing. 18 Q Okay. 19 MR. SELDIN: Mr. Fisher, we've been going 20 for over an hour. Do you have more on this 21 paper? 22 MR. FISHER: Not on this one. I did want to 23 get into Luders and Berglund and Rametti. But if 24 we need a break, that's fine. We can take a 25 break. We can come back -- and we can hit those</p>	<p style="text-align: right;">Page 84</p> <p>1 It says, "Further research needs to resolve 2 whether the observed distinct features in the 3 brains of transsexuals influence their gender 4 identity or possibly are a consequence of being 5 transsexual." 6 What do you take that sentence to mean? 7 MR. SELDIN: Object to form. 8 A I think that it is asking the question of 9 causality. Right? Is the -- the differences 10 that we're seeing, is it the cause of -- is it 11 contributing to one's gender identity, or does 12 the gender identity contribute to the finding 13 that we're describing in this paper? 14 Q And this paper doesn't purport to tell us which 15 it is, correct? 16 MR. SELDIN: Object to form. 17 A This paper is describing the difference and then 18 asking -- in their discussion, like in any paper, 19 saying that there's limitations to this, that 20 they haven't -- that they're describing further 21 research needed to resolve the question of 22 causality in -- after their conclusion. 23 Q Without an assessment of causality, how is this 24 paper evidence of a strong foundation -- strong 25 biological foundation of transgenderism?</p>

<p style="text-align: right;">Page 85</p> <p>1 MR. SELDIN: Object to form.</p> <p>2 A You know, I think that it's fine to say that none</p> <p>3 of these papers are a smoking gun that points to</p> <p>4 a biologic root of gender identity, that in my</p> <p>5 review of this material -- "this material,"</p> <p>6 material related to genetics, hormonal</p> <p>7 influences -- the conclusion that I come to is</p> <p>8 that there is a biologic foundation to gender</p> <p>9 identity.</p> <p>10 Do we have all the answers to why? We do</p> <p>11 not. I think that this paper is interesting with</p> <p>12 respect to the fact that they are able to measure</p> <p>13 these differences.</p> <p>14 Are they able to prove causality? No, and</p> <p>15 they say that.</p> <p>16 But, you know, with all of the other</p> <p>17 materials presented, my opinion is that there's</p> <p>18 evidence to biologic foundation of gender</p> <p>19 identity.</p> <p>20 Q Well, this one doesn't show it. Savic said you</p> <p>21 can't -- that there isn't enough data. Is it</p> <p>22 just Chung?</p> <p>23 MR. SELDIN: Object to form. Misstates</p> <p>24 testimony.</p> <p>25 A I'm testifying that -- if the question is, is</p>	<p style="text-align: right;">Page 87</p> <p>1 specifically just about that question, and I</p> <p>2 don't think that's why I was called as an expert.</p> <p>3 But hope to, that -- in providing at least some</p> <p>4 of the representative materials, that the point</p> <p>5 would be sufficiently made.</p> <p>6 Now, whether it is for each reader, I</p> <p>7 suppose that -- that's up to you. But I hope</p> <p>8 that -- at least my effort was to provide a</p> <p>9 representative sampling of materials to</p> <p>10 demonstrate the notion that gender identity has a</p> <p>11 biologic foundation.</p> <p>12 BY MR. FISHER:</p> <p>13 Q Well, thank you. But I guess I just really want</p> <p>14 a yes-or-no answer.</p> <p>15 When you say that "scientific research and</p> <p>16 medical literature across disciplines</p> <p>17 demonstrates that gender identity, like</p> <p>18 components of sex, has a strong biological</p> <p>19 foundation," are you relying on studies or</p> <p>20 sources of evidence other than what's cited in</p> <p>21 paragraph 29?</p> <p>22 MR. SELDIN: I'm sorry, Mr. Fisher. Were</p> <p>23 you reading from his declaration?</p> <p>24 MR. FISHER: Yeah, I was. It's paragraph</p> <p>25 29.</p>
<p style="text-align: right;">Page 86</p> <p>1 there biologic foundation to gender identity, in</p> <p>2 my review of all of the literature, including the</p> <p>3 ones that I included in my expert report, my</p> <p>4 conclusion is that there does seem to be.</p> <p>5 That, you know, I think that when -- when</p> <p>6 trying to answer a really challenging scientific</p> <p>7 question, you know, that the findings of each</p> <p>8 individual paper aren't going to lead you to a</p> <p>9 definitive conclusion.</p> <p>10 But in trying to answer that challenging</p> <p>11 question, one pulls from a variety of different</p> <p>12 sources to come to a conclusion.</p> <p>13 The conclusion that I reached upon review of</p> <p>14 this evidence is that there is a biologic</p> <p>15 foundation to gender identity.</p> <p>16 Q Is that conclusion based on studies that are not</p> <p>17 cited in paragraph 29 at all?</p> <p>18 MR. SELDIN: Object to form.</p> <p>19 COURT REPORTER: Doctor, you're frozen</p> <p>20 again. I'm sorry. You'll have to start again.</p> <p>21 A Yeah. So I think my attempt in paragraph 29 was</p> <p>22 to provide a representative sampling of some of</p> <p>23 the data which supports the notion that gender</p> <p>24 identity has a strong biologic foundation, you</p> <p>25 know. Certainly there could be chapters written</p>	<p style="text-align: right;">Page 88</p> <p>1 MR. SELDIN: Okay. So -- sorry. I</p> <p>2 apologize for interrupting.</p> <p>3 A I believe the answer to your question is yes.</p> <p>4 You know, I think that the statement itself,</p> <p>5 "scientific research and medical literature</p> <p>6 across disciplines demonstrates that gender</p> <p>7 identity, like other components of sex, has a</p> <p>8 strong biological foundation," is a statement</p> <p>9 that I agree with based on my understanding of a</p> <p>10 wide variety of literature.</p> <p>11 And for the purposes of writing this report,</p> <p>12 I tried to include some of that literature but</p> <p>13 certainly, you know, for the purposes of</p> <p>14 logistics and brevity, can't include everything.</p> <p>15 But I agree with the first sentence of</p> <p>16 paragraph 29, and whether there's other citations</p> <p>17 that could help support that statement that</p> <p>18 aren't included, certainly there are. And I</p> <p>19 guess that's where I would leave it.</p> <p>20 BY MR. FISHER:</p> <p>21 Q Okay. So back to Luders. Does Luders say</p> <p>22 anything about any connection between the -- kind</p> <p>23 of the brain phenomena it was studying and sexual</p> <p>24 orientation?</p> <p>25 MR. SELDIN: Object to form.</p>

<p style="text-align: right;">Page 89</p> <p>1 A I don't recall.</p> <p>2 Q And if we look at -- back to the subject of</p> <p>3 causality, if we look in that same paragraph that</p> <p>4 we were talking about before, it looks like</p> <p>5 the -- it's either the second or third sentence.</p> <p>6 Well, the second sentence says that there may be</p> <p>7 other variables affecting both the expression of</p> <p>8 a transsexual identity and the neuroanatomy in</p> <p>9 transsexuals that led to these observed</p> <p>10 associations. "Some possible candidates include</p> <p>11 genetic predisposition" -- which I think you've</p> <p>12 mentioned -- "psychosocial, and environmental</p> <p>13 influences, hormone exposures, or most likely an</p> <p>14 interplay between these variables."</p> <p>15 You're familiar with that sentence?</p> <p>16 A Yeah, I heard you read it.</p> <p>17 Q Yep. Had you read it before? Were you aware of</p> <p>18 it before?</p> <p>19 A Yes. I've read this paper.</p> <p>20 Q And one thing I think I wanted to ask you about,</p> <p>21 that I'm not sure we have any studies on, is the</p> <p>22 hormonal connection. And what did you mean by</p> <p>23 the hormonal connection -- the potential for</p> <p>24 hormonal connection?</p> <p>25 MR. SELDIN: Object to form.</p>	<p style="text-align: right;">Page 91</p> <p>1 I think that in other examples you have --</p> <p>2 you know, in examples of -- for someone with a</p> <p>3 chromosomal sex of XY, who during fetal life, you</p> <p>4 know, was making testosterone and then had</p> <p>5 amputation of the penis right after delivery, as</p> <p>6 horrible as that might sound, and amputation of</p> <p>7 the testes, and so the person raised female then</p> <p>8 had a gender identity of male, potentially due to</p> <p>9 impact of hormonal exposures.</p> <p>10 I think that this notion that complicated</p> <p>11 human characteristics, such as gender identity,</p> <p>12 are likely an interplay of many different factors</p> <p>13 is correct, that, you know, on the one hand my</p> <p>14 CAH example might be -- it might be interesting,</p> <p>15 but as it turns out, the majority of adult women</p> <p>16 with CAH do not identify as men. Right?</p> <p>17 So if it was only hormonal exposure, then we</p> <p>18 would expect all women with CAH to be</p> <p>19 transgender. If it was only the size of your</p> <p>20 putamen or whatever, from these studies, then we</p> <p>21 could use -- you know, use that as the test,</p> <p>22 which we've talked about you can't.</p> <p>23 So, really, that -- with a complex trait</p> <p>24 like gender dysphoria, you know, these influence</p> <p>25 of multiple factors, you know, similarly to other</p>
<p style="text-align: right;">Page 90</p> <p>1 A Well, so, for example, a patient population that</p> <p>2 I also take care of is individuals with something</p> <p>3 called congenital adrenal hyperplasia. And in</p> <p>4 this condition, someone born with, you know,</p> <p>5 chromosomal sex female has a problem in their</p> <p>6 adrenal glands making certain hormones. And as a</p> <p>7 result, in fetal life those individuals are</p> <p>8 exposed to higher than level -- higher than</p> <p>9 normal levels of androgens or what we would think</p> <p>10 of as more masculine hormones.</p> <p>11 And so babies born with congenital adrenal</p> <p>12 hyperplasia, with an XX carrier type, often have,</p> <p>13 you know, virilization of their anatomy to some</p> <p>14 degree and require treatment for this condition</p> <p>15 called congenital adrenal hyperplasia or CAH.</p> <p>16 Now, after they're born, girls with CAH</p> <p>17 receive medications to lower that androgen level</p> <p>18 and lower it back into the normal female range.</p> <p>19 That subsequently there are overrepresentation of</p> <p>20 adult women with CAH that have a difference in</p> <p>21 their gender identity.</p> <p>22 And so the notion there is, you know,</p> <p>23 perhaps does this fetal exposure to higher than</p> <p>24 normal androgens in some way influence future</p> <p>25 gender identity?</p>	<p style="text-align: right;">Page 92</p> <p>1 human characteristics seems to, you know, work</p> <p>2 together in each individual person to help --</p> <p>3 help to form our gender identity.</p> <p>4 Q Including social and environmental factors?</p> <p>5 MR. SELDIN: Object to form.</p> <p>6 A Certainly I think that narrows -- you know,</p> <p>7 there's lots of different exposures that we have</p> <p>8 along the way. You know, we've talked about</p> <p>9 hormone disrupters from the environment. You</p> <p>10 know, there's a lot of different unknown factors</p> <p>11 also involved with gender identity just like</p> <p>12 other human characteristics.</p> <p>13 So environmental exposures and factors</p> <p>14 certainly could play a role, similarly, to</p> <p>15 genetic, hormonal, and other biologic influences.</p> <p>16 Q Let's take a look at Exhibit 11. This is the</p> <p>17 Bergland study, Male-to-Female Transsexuals.</p> <p>18 (Shumer Exhibit 11 marked.)</p> <p>19 Q Doctor, are you familiar with this study?</p> <p>20 A Yes.</p> <p>21 Q Is this another of the studies cited in paragraph</p> <p>22 29 of your declaration?</p> <p>23 A Yes.</p> <p>24 Q What is this study purporting to tell us?</p> <p>25 MR. SELDIN: Object to form.</p>

<p style="text-align: right;">Page 93</p> <p>1 A So I use that as another example of the same</p> <p>2 things that we've been talking about with respect</p> <p>3 to, you know, search for variations in brain --</p> <p>4 brain activity or anatomy based upon one's gender</p> <p>5 identity.</p> <p>6 Q How many subjects were the focus of this study?</p> <p>7 A If you'd give me a second to zoom in a little bit</p> <p>8 here.</p> <p>9 Q Yes.</p> <p>10 A So they studied 12 transgender individuals in</p> <p>11 this particular study.</p> <p>12 Q Is that a statistically significant data set in</p> <p>13 your view?</p> <p>14 MR. SELDIN: Object to form.</p> <p>15 A I think it depends on what question you're trying</p> <p>16 to ask. Right? You know, I think that the</p> <p>17 authors here are presenting a finding from 12</p> <p>18 people. Does this, again, answer the question?</p> <p>19 Is this a smoking gun as to, aha, this is -- we</p> <p>20 can use this particular test to find gender --</p> <p>21 find someone's gender identity? Of course not.</p> <p>22 But I included it just, again, as another</p> <p>23 representative example of the point that I was</p> <p>24 trying to make with the first sentence of</p> <p>25 paragraph 29.</p>	<p style="text-align: right;">Page 95</p> <p>1 A I don't think I would change my answer to the one</p> <p>2 I just gave.</p> <p>3 Q Well, I'm not clear what your answer is, really.</p> <p>4 Just "yes" or "no." Can you generalize from this</p> <p>5 study?</p> <p>6 MR. SELDIN: Object to form.</p> <p>7 A Generalize what?</p> <p>8 Q Generalize the conclusions that they purport to</p> <p>9 draw.</p> <p>10 MR. SELDIN: Object to form.</p> <p>11 A Okay. So let's try to answer that. So the</p> <p>12 conclusion is that a person's --</p> <p>13 MR. SELDIN: Shawn, can you make it a little</p> <p>14 bit bigger?</p> <p>15 Thank you so much.</p> <p>16 A Okay. So I think you're asking can we say how --</p> <p>17 if a 13th person came along, how their -- how</p> <p>18 their cerebral activation would work when</p> <p>19 smelling 4,16-androstadien-3-one and estra-1,3,5</p> <p>20 (10), 16-tetraen-3-ol? You know, I don't think</p> <p>21 that we can generalize what would happen to that</p> <p>22 13th person.</p> <p>23 And, you know, so the study is describing</p> <p>24 what they found with the 12 people that they</p> <p>25 studied. Is this study helpful? I think it's</p>
<p style="text-align: right;">Page 94</p> <p>1 Q So can you generalize from this study?</p> <p>2 MR. SELDIN: Object to form.</p> <p>3 A I'll give the same answer that I've been giving</p> <p>4 for all of these studies, that as a -- when taken</p> <p>5 in whole, I would suggest that these studies and</p> <p>6 the body of literature, in my estimation, does</p> <p>7 lay credence to the idea that there's biologic</p> <p>8 foundation to gender identity.</p> <p>9 Q I'm not talking about the body of evidence. I'm</p> <p>10 just asking about this one study. Can you</p> <p>11 generalize from this one study?</p> <p>12 MR. SELDIN: Object to form. Asked and</p> <p>13 answered.</p> <p>14 A The study is part of the body of evidence that</p> <p>15 I'm referring to. So no one study is going to</p> <p>16 answer such a complicated question as the one</p> <p>17 you're asking. I don't think the authors, when</p> <p>18 they published this study, were thinking that</p> <p>19 they were closing the book on what determines one</p> <p>20 gender identity.</p> <p>21 They were contributing to a body of</p> <p>22 literature that I attempted to summarize.</p> <p>23 Q So, no -- the answer is, no, you can't generalize</p> <p>24 from this study?</p> <p>25 MR. SELDIN: Object to form.</p>	<p style="text-align: right;">Page 96</p> <p>1 helpful.</p> <p>2 Does it generalize to my work with</p> <p>3 13-year-old patients that I'm seeing in the</p> <p>4 office? You know, I don't know. I think that</p> <p>5 depends on the question that I'm being asked when</p> <p>6 thinking about that 13-year-old. You know, if</p> <p>7 the question is does this person need treatment</p> <p>8 for -- should I be following the clinical</p> <p>9 practice guidelines for the treatment of gender</p> <p>10 dysphoria in this 13-year-old? You know, I think</p> <p>11 indirectly this helps with that question because</p> <p>12 it helped to form the current guidelines that we</p> <p>13 use in practicing medicine related to gender</p> <p>14 dysphoria.</p> <p>15 But I'm not thinking about this specific</p> <p>16 article when generalizing to that 13-year-old in</p> <p>17 the office.</p> <p>18 BY MR. FISHER:</p> <p>19 Q So this study also has a statement -- and I was</p> <p>20 hoping you could help me unpack it -- under the</p> <p>21 "Discussion" -- I'm sorry. It's not under the</p> <p>22 "Discussion." It's -- well, yes, it is. It's</p> <p>23 "Methodological Issues."</p> <p>24 On page 1906, the paragraph that's on the</p> <p>25 left column at the bottom, beginning "The primary</p>

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1 **hypothesis."**

2 A All right. Can you orient me again, where you

3 were?

4 Q **Yeah. Yeah.**

5 MR. FISHER: Right there. If you could blow

6 that up a little bit, Shawn. The paragraph that

7 begins "The primary hypothesis." A little bit

8 farther down, Shawn.

9 There we go.

10 BY MR. FISHER:

11 Q **So in the middle of this paragraph, it says -- it**

12 **has -- well, it has a discussion about**

13 **homosexuality and transsexuality. But it says,**

14 **"Nonhomosexual transsexuals may be heterosexual,**

15 **asexual, and bisexual." And then it says,**

16 **"Optimally, our transsexual subjects should have**

17 **been strictly heterosexual according to the**

18 **present operative definition (having only female**

19 **sex partners), like our male controls."**

20 So -- and I'm wondering, if you could,

21 please, just unpack that and help me understand

22 what these authors are saying about their

23 methodological limits in light of that statement.

24 MR. SELDIN: Object to form.

25 A All right. You're going to have to give me a

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1 second here.

2 Q **Okay.**

3 A Okay. So I think what's going on here is they're

4 saying, okay, we're trying to isolate gender

5 identity here and not be measuring differences

6 based on sexual orientation. Right? So, for

7 example, if you have -- if you have a finding

8 that smelling these chemicals has a different

9 response in gay men compared to straight men and

10 then you're now wanting to -- and that's -- and

11 that's a known fact. Right? Let's say that

12 that's a known fact, that smelling these

13 chemicals is different based on one's sexual

14 orientation.

15 Then you want to say, okay, well, I'm

16 interested in the -- I'm not interested in

17 learning more about sexual orientation. I'm

18 interested in learning about gender identity.

19 They're saying that if you include -- if

20 you're doing a study with trans women now, that

21 you don't want to cloud the findings by including

22 people of various sexual orientations because

23 you're trying to isolate the finding that you're

24 looking for, which is related to gender identity.

25 That's how I would understand that sentence.

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1 Q **So do you understand them to be saying that they**

2 **were -- given their 12 subjects, they were unable**

3 **to control for sexual orientation?**

4 MR. SELDIN: Object to form.

5 A I don't -- you know, I'm not sure. I guess I --

6 I'd have to go back and see if they mention --

7 where they mention how they assess some -- the

8 subject's sexual orientation.

9 Q **Do you -- when you first read or when you studied**

10 **this paper have you thought about that control --**

11 **that methodological control and whether it was in**

12 **place and fully accounted for?**

13 MR. SELDIN: Object to form.

14 A You know, I think that I had no knowledge of this

15 type of study in the first place, and so I think

16 that there -- you know, when I read this study,

17 you know, the question they're answering is one

18 that I'm not very familiar with, about brain

19 activation in sniffing different chemicals.

20 Right?

21 And so, you know, does that -- as to whether

22 there has ever been thought to be a difference in

23 that response based on someone's sexual

24 orientation, you know, I wasn't aware of that.

25 So when reading this sentence, you know, they're

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1 pointing out that question. And I still don't

2 know the answer to that.

3 But what I do know is that this paper

4 continues to serve as, you know, one example of

5 the interesting but, you know, somewhat esoteric

6 findings that we see in the brains of people with

7 differences of gender identity.

8 Q **Well, when you decide to rely on a paper, do you**

9 **take into account the methodological controls**

10 **that are in place when it was written?**

11 MR. SELDIN: Object to form.

12 A I do.

13 Q **Did you take into account this methodological**

14 **control when you were relying on -- deciding to**

15 **rely on this paper?**

16 MR. SELDIN: Object to form.

17 A I did. I felt like this paper was instructive in

18 regards to trying to support my -- my argument

19 that there's biologic foundation in -- biologic

20 foundation to gender identity despite the fact

21 that all articles have limitations.

22 Q **Well, but I'm worried about this specific**

23 **limitation. Despite the failure to control for**

24 **sexual orientation, you felt that this said**

25 **something about gender identity?**

<p style="text-align: right;">Page 101</p> <p>1 MR. SELDIN: Object to form.</p> <p>2 A If you -- I might be able to answer this question</p> <p>3 a little bit better if I am given a little time</p> <p>4 to read the whole paragraph, if you would.</p> <p>5 Q Yeah. Go ahead.</p> <p>6 A Okay. Thank you.</p> <p>7 Q Yes.</p> <p>8 A Yeah. So what they're saying is they</p> <p>9 purposefully did not include homosexual, as</p> <p>10 they're referring to it, or gynecophile, people</p> <p>11 attracted to women -- hold on.</p> <p>12 Only nonhomosexual transsexuals were</p> <p>13 included in this -- in the present study, is the</p> <p>14 sentence before the one highlighted. So what</p> <p>15 they're saying is they were thinking about this</p> <p>16 question that you're asking. Should we be trying</p> <p>17 to account for sexual orientation? And this is</p> <p>18 how they did it. They excluded nonhomosexual</p> <p>19 transsexuals.</p> <p>20 The next sentence is saying, you know, but</p> <p>21 of course we know that sexual orientation is a</p> <p>22 spectrum and that some people are asexual. Some</p> <p>23 people are bisexual. Do we know for sure if all</p> <p>24 of the subjects in our study had ever been</p> <p>25 attracted to someone of a different sex? You</p>	<p style="text-align: right;">Page 103</p> <p>1 A I think it's possible to account for sexual</p> <p>2 orientation. You can ask what someone's sexual</p> <p>3 orientation is. You can include people that only</p> <p>4 provide a certain answer. And, you know -- but</p> <p>5 as a very complex trait, just like gender</p> <p>6 identity, you know, sexual orientation is not as</p> <p>7 black-and-white, as we know, as, you know,</p> <p>8 straight or gay. So I think that that -- you</p> <p>9 can -- you can account for it, but that like any</p> <p>10 study there's going to be limitations that you</p> <p>11 discuss -- in every study there is discussion of</p> <p>12 these limitations.</p> <p>13 So I don't think that brain studies</p> <p>14 regarding gender identity are impossible to do</p> <p>15 because people have a gender identity, but I</p> <p>16 think it's something that researchers attempt to</p> <p>17 control for, just like they did in this study.</p> <p>18 Q That was going to be my next question. You used</p> <p>19 the term "account," and then in the last sentence</p> <p>20 you used the word "control." Are you using those</p> <p>21 two terms interchangeably from a scientific</p> <p>22 perspective?</p> <p>23 MR. SELDIN: Object to form.</p> <p>24 A I don't know how I was using them in that</p> <p>25 sentence, but I would describe "control" in a</p>
<p style="text-align: right;">Page 102</p> <p>1 know, impossible to say. But at least we tried</p> <p>2 to account for that by not recruiting</p> <p>3 nonhomosexual transsexuals.</p> <p>4 So, you know, I think that they're sort of</p> <p>5 going above and beyond to say like, yep, we</p> <p>6 didn't want to include this group. We didn't,</p> <p>7 but there's still -- you know, because sexual</p> <p>8 orientation is so complicated, you know, this is</p> <p>9 something that is, you know, still possible, that</p> <p>10 maybe a participant or some participants have a</p> <p>11 sexual orientation that's not so straightforward.</p> <p>12 So if the question is does that make me feel</p> <p>13 like this study should be disregarded, I would</p> <p>14 say absolutely not.</p> <p>15 I think that, you know, it's still</p> <p>16 instructive to the degree that it helps as one</p> <p>17 more, you know, piece of evidence regarding the</p> <p>18 overall argument that I was trying to make.</p> <p>19 Q Given your observations about sexual orientation,</p> <p>20 do you think it's possible to control for sexual</p> <p>21 orientation when doing a study such as this or</p> <p>22 other, you know -- a study of the brain when</p> <p>23 you're trying to figure out if gender identity is</p> <p>24 related to brain structure?</p> <p>25 MR. SELDIN: Object to form.</p>	<p style="text-align: right;">Page 104</p> <p>1 study as trying to isolate the finding that</p> <p>2 you're interested in. So if you're not</p> <p>3 interested in the effect of sexual orientation on</p> <p>4 the outcome, then you're going to attempt to</p> <p>5 enroll patients with the same sexual orientation</p> <p>6 and have the variable be something else that</p> <p>7 you're interested in.</p> <p>8 Q Yeah. Fair enough. I just wanted -- you said</p> <p>9 that these authors attempted to account for it or</p> <p>10 there could be an attempt to account. And I'm</p> <p>11 wondering if that in your mind equates to</p> <p>12 control.</p> <p>13 If someone accounts for something, in your</p> <p>14 mind again -- I'm just trying to understand what</p> <p>15 you're saying -- is that the same thing as</p> <p>16 controlling?</p> <p>17 A Yes.</p> <p>18 Q Okay. Let's go on to Rametti, Exhibit 12.</p> <p>19 Rametti white matter micro structure.</p> <p>20 (Shumer Exhibit 12 marked.)</p> <p>21 Q Okay. So, Doctor, is this the same Rametti study</p> <p>22 cited in paragraph 29 of your declaration?</p> <p>23 A Yep.</p> <p>24 Q What is this study purporting to tell us?</p> <p>25 A This is sort of a very similar idea to the others</p>

<p style="text-align: right;">Page 105</p> <p>1 that we've been reviewing, that there's</p> <p>2 microscopic brain differences in people, that</p> <p>3 while they overlap between the sexes, are subtly</p> <p>4 different. And that in this example they're</p> <p>5 talking about a different part of the brain,</p> <p>6 white matter, and referring to people assigned</p> <p>7 female at birth, comparing these structures to --</p> <p>8 so people that were assigned female at birth that</p> <p>9 are not transgender.</p> <p>10 Q Do you know whether these authors controlled for</p> <p>11 sexual orientation?</p> <p>12 A I don't recall.</p> <p>13 Q Under 4.2 -- this is on the -- I guess page 5, it</p> <p>14 looks like. 4.2, Strengths and limitations.</p> <p>15 MR. FISHER: There we go.</p> <p>16 BY MR. FISHER:</p> <p>17 Q 4.2, Strengths and limitations. The second</p> <p>18 paragraph there says, "One limitation of this</p> <p>19 study is that the conclusions are not</p> <p>20 generalizable to male-to-female transsexual</p> <p>21 subjects since we have not included a cohort of</p> <p>22 nontreated male-to-female transsexuals." Why</p> <p>23 not -- I mean, why does that mean that it's not</p> <p>24 generalizable?</p> <p>25 MR. SELDIN: Object to form.</p>	<p style="text-align: right;">Page 107</p> <p>1 asking that question or able to answer it.</p> <p>2 They're only discussing what they're studying,</p> <p>3 which is people assigned female at birth.</p> <p>4 Q Well, notwithstanding that, do you think that</p> <p>5 it's generalizable anyway from female to male to</p> <p>6 male to female?</p> <p>7 MR. SELDIN: I'm sorry, Mr. Fisher, you</p> <p>8 broke up during the question.</p> <p>9 MR. FISHER: Oh, I'm sorry.</p> <p>10 BY MR. FISHER:</p> <p>11 Q I'm just wondering, notwithstanding this</p> <p>12 limitation, do you think it's, in any event,</p> <p>13 generalizable to the male-to-female transsexuals?</p> <p>14 MR. SELDIN: Object to form.</p> <p>15 A I don't know. I think the question you're asking</p> <p>16 is, you know, if we repeated this study and did</p> <p>17 the study comparing people assigned male at birth</p> <p>18 and compared the same white matter to people</p> <p>19 assigned male at birth who are now -- that are</p> <p>20 trans women, would there also be a significant</p> <p>21 result of that study? I don't know the answer to</p> <p>22 that.</p> <p>23 The answer to the -- this study is related</p> <p>24 to trans -- trans -- trans men. Right? So I</p> <p>25 don't know.</p>
<p style="text-align: right;">Page 106</p> <p>1 A They didn't study that. This is a study</p> <p>2 regarding people assigned female at birth.</p> <p>3 Q So this white matter could be theoretically</p> <p>4 associated with gender identity for female to</p> <p>5 male and yet not be associated with male to</p> <p>6 female? Is that sort of the proposition we're</p> <p>7 dealing with?</p> <p>8 MR. SELDIN: Object to form.</p> <p>9 A Well, I would say that they're saying that their</p> <p>10 findings -- they have a finding in people</p> <p>11 assigned female at birth, but they have nothing</p> <p>12 to say about people assigned male at birth</p> <p>13 because that wasn't the question they were asking</p> <p>14 nor the question that they're able to answer with</p> <p>15 this study.</p> <p>16 Q And I'm just wondering at a theoretical level why</p> <p>17 would we suppose that it would be different for</p> <p>18 one, you know, female to male, but not male to</p> <p>19 female?</p> <p>20 MR. SELDIN: Object to form.</p> <p>21 Q Why assume a difference? Why not just say, well,</p> <p>22 it's humans?</p> <p>23 MR. SELDIN: Object to form.</p> <p>24 A Well, I think you can assume anything you want,</p> <p>25 but they're saying in this study they're not</p>	<p style="text-align: right;">Page 108</p> <p>1 Q Okay. I think we're done with that exhibit.</p> <p>2 MR. FISHER: It's getting close to noon. Do</p> <p>3 you want to -- this is a fine time to break for</p> <p>4 lunch, Harper, if you like, or I can go a little</p> <p>5 bit longer. Whatever you think.</p> <p>6 MR. SELDIN: Yeah. I think that's fine.</p> <p>7 Just when we come back, let's just talk about</p> <p>8 clock management. Dr. Shumer needs to be done at</p> <p>9 5:30.</p> <p>10 MR. FISHER: Oh.</p> <p>11 MR. SELDIN: By my count, you still are</p> <p>12 going to be fine with your 7 hours with a</p> <p>13 45-minute break and some lunch break, but, you</p> <p>14 know, we can get down to minutes if you don't</p> <p>15 think that's the case. But how about we come</p> <p>16 back at 12:45?</p> <p>17 MR. FISHER: Yeah. I mean, you know, I am a</p> <p>18 little concerned now that you mention it. So is</p> <p>19 12:30 too fast to get back? Is that too soon?</p> <p>20 MR. SELDIN: Well, so I think as of 12:15</p> <p>21 that you will be going three hours, with about 15</p> <p>22 minutes of breaks built in. So if we come back</p> <p>23 at 12:45 or 1:00, you still have -- we have time</p> <p>24 for breaks. So I suspect we don't need to go to</p> <p>25 the judge over 7 minutes. So why don't we come</p>

<p style="text-align: right;">Page 109</p> <p>1 back at 12:45, and everyone will be okay.</p> <p>2 MR. FISHER: All right. Thanks. Sounds</p> <p>3 good. We'll see everybody then.</p> <p>4 (Luncheon recess taken from 11:55 a.m. to</p> <p>5 12:44 p.m.)</p> <p>6 MR. FISHER: Let's go back on the record</p> <p>7 then.</p> <p>8 BY MR. FISHER:</p> <p>9 Q Doctor, let's turn to your report again. This</p> <p>10 time to paragraph 30. And here -- well, let's</p> <p>11 wait till Shawn gets there.</p> <p>12 MR. FISHER: This is Exhibit 2. Yeah.</p> <p>13 There we go. Perfect.</p> <p>14 BY MR. FISHER:</p> <p>15 Q So here you talk about varying degrees of gender</p> <p>16 dysphoria; do you see that?</p> <p>17 A I do.</p> <p>18 Q And I'm wondering, how do you determine degrees</p> <p>19 of gender dysphoria for a particular patient?</p> <p>20 MR. SELDIN: Object to form.</p> <p>21 A Well, I think that's one of the important aspects</p> <p>22 of my job. Right? So if someone has gender</p> <p>23 dysphoria, then -- then we need to know -- well,</p> <p>24 how is that affecting that person in their</p> <p>25 day-to-day life? Is it that, you know, a person</p>	<p style="text-align: right;">Page 111</p> <p>1 professional, and their doctor to create a care</p> <p>2 plan.</p> <p>3 And let's say the child's anxiety is</p> <p>4 relatively low, you know. They might manage that</p> <p>5 anxiety by mindfulness or by avoiding things that</p> <p>6 make them anxious or by, you know, talking about</p> <p>7 their anxiety. Someone has more significant</p> <p>8 anxiety, maybe they would receive medication to</p> <p>9 treat their anxiety. With the ultimate goal of</p> <p>10 reducing the anxiety.</p> <p>11 And so, you know, how the anxiety is then</p> <p>12 treated depends on the severity. There's</p> <p>13 multiple nonmedical and medical treatment</p> <p>14 options, and then you work with the adolescent</p> <p>15 and their family on figuring out what the right</p> <p>16 best next step is for treatment with the goal of</p> <p>17 reducing anxiety.</p> <p>18 For gender dysphoria, I was sort of -- you</p> <p>19 know, I use that example to illustrate how gender</p> <p>20 dysphoria has various degrees of severity. You</p> <p>21 know, if a patient has gender dysphoria and that</p> <p>22 their gender dysphoria seems to improve with</p> <p>23 nonmedical interventions such as, you know,</p> <p>24 getting a haircut or using the name or pronouns</p> <p>25 that they -- that they've chosen to use or</p>
<p style="text-align: right;">Page 110</p> <p>1 is uncomfortable wearing tight-fitting clothing</p> <p>2 and would benefit from maybe a compression</p> <p>3 garment for their chest? Or are they unable to</p> <p>4 leave their house? Unable to shower?</p> <p>5 You know, that -- I'm trying to understand</p> <p>6 how the incongruence between assigned sex and</p> <p>7 gender identity -- whether that's causing them</p> <p>8 distress and how that distress is manifesting in</p> <p>9 their relationship with the world and with other</p> <p>10 people.</p> <p>11 Q Okay. And I understand the different, I guess</p> <p>12 for lack of a better term, symptoms that you've</p> <p>13 described, with the clothing or being unable to</p> <p>14 leave the house.</p> <p>15 But what do you mean there by "degrees"? Is</p> <p>16 one of those more severe than the other, or are</p> <p>17 they just different? Or how do you describe</p> <p>18 that?</p> <p>19 A Yeah. So I would say that there's different</p> <p>20 severity of gender dysphoria. You know, an</p> <p>21 example that I could use is, you know, let's say</p> <p>22 someone has -- say someone has anxiety, for</p> <p>23 example. That's another DSM diagnosis. And</p> <p>24 then, you know, an adolescent with anxiety, they</p> <p>25 work with their parents, with their mental health</p>	<p style="text-align: right;">Page 112</p> <p>1 wearing clothes that makes them feel more</p> <p>2 comfortable and then their dysphoria is more</p> <p>3 managed, then that's great. Then the goal of</p> <p>4 reducing gender dysphoria has been accomplished.</p> <p>5 Now, if the person's gender dysphoria is</p> <p>6 more severe, and while nonmedical interventions</p> <p>7 may be helping, that's where we would consider</p> <p>8 medical interventions such as the medications</p> <p>9 that are outlined in my report.</p> <p>10 Q Is it appropriate to use nonmedical interventions</p> <p>11 before proceeding to medical interventions?</p> <p>12 MR. SELDIN: Object to form.</p> <p>13 A Absolutely. I think that a lot of times patients</p> <p>14 that I see almost always have to some degree been</p> <p>15 treating their gender dysphoria with nonmedical</p> <p>16 interventions, you know. And so I think that in</p> <p>17 the course of treatment of gender dysphoria,</p> <p>18 nonmedical interventions are typically utilized</p> <p>19 before even seeing the doctor.</p> <p>20 Q Well, do you see patients and say, well, we're</p> <p>21 not ready for medical -- "In my professional</p> <p>22 opinion, you're not ready for medical</p> <p>23 interventions yet. Let's try some nonmedical</p> <p>24 interventions"?</p> <p>25 MR. SELDIN: Object to form.</p>

<p style="text-align: right;">Page 113</p> <p>1 A Yes, that's certainly happened.</p> <p>2 Q All right. Let's -- so paragraph 31, you use</p> <p>3 another term, the second line. It says,</p> <p>4 "clinically important distress in the person's</p> <p>5 life." And I'm wondering what makes a patient's</p> <p>6 distress clinically important.</p> <p>7 A Yeah. So I think that the DSM is trying to</p> <p>8 providing guidance on the diagnosis of gender</p> <p>9 dysphoria saying that there -- I believe the</p> <p>10 words are maybe "distress or impairment in." But</p> <p>11 I think the idea here is that not only do I have</p> <p>12 this feeling -- this negative feeling that we're</p> <p>13 calling gender dysphoria here, but also it</p> <p>14 matters for some reason. Right? That it's not</p> <p>15 something that I can just shrug off and move on</p> <p>16 with my day, that it's interfering with how I</p> <p>17 move about the world or, you know, affecting my</p> <p>18 grades or my relationship with my friends or my</p> <p>19 feelings of self-worth. It's contributing to my</p> <p>20 life in a negative way that makes my life not as</p> <p>21 good as if I did not have gender dysphoria.</p> <p>22 Q Is there a way to -- I don't know -- score that</p> <p>23 distress to decide whether it's clinically</p> <p>24 important, or you just have to sort of know it</p> <p>25 when you see it, or how do you look at it?</p>	<p style="text-align: right;">Page 115</p> <p>1 Q Okay. So there -- and I just want to make sure I</p> <p>2 understand. You can have a sense of discomfort</p> <p>3 about your -- how your gender doesn't align with</p> <p>4 your natal sex, but that discomfort alone isn't</p> <p>5 enough to qualify you for the diagnosis of gender</p> <p>6 dysphoria?</p> <p>7 MR. SELDIN: Object to form.</p> <p>8 A That's right. So I think if we look, you know,</p> <p>9 at the verbiage of the diagnosis in the DSM-IV, I</p> <p>10 think you're describing, you know, Criteria A,</p> <p>11 that there's distress. Part B, which also is</p> <p>12 necessary to make the diagnosis, talks about the</p> <p>13 relevance of that distress.</p> <p>14 Q I've gotcha. Okay. All right. So then in the</p> <p>15 same paragraph, I think, it talks about -- this</p> <p>16 is still 31 -- "Strong desire to be rid of one's</p> <p>17 primary or secondary sex characteristics, a</p> <p>18 strong desire to be treated as a member of the</p> <p>19 identified gender, or a strong conviction that</p> <p>20 one has the typical feelings of identified</p> <p>21 gender."</p> <p>22 So I'm wondering about this idea of</p> <p>23 "strong." How do you measure strong feelings</p> <p>24 versus weak ones?</p> <p>25 A Again, I think that's part of the biopsychosocial</p>
<p style="text-align: right;">Page 114</p> <p>1 A Yeah. I think that comes with experience of</p> <p>2 working with young people and talking about their</p> <p>3 life and their mental health, you know. So, for</p> <p>4 example, when I'm, you know, talking to a mental</p> <p>5 health professional that is taking care of a</p> <p>6 child that has been diagnosed with gender</p> <p>7 dysphoria, oftentimes they're reporting, you</p> <p>8 know, how that gender dysphoria is impacting that</p> <p>9 person's life, and so there's richness in that</p> <p>10 story, of course.</p> <p>11 There are different ways that you can, you</p> <p>12 know, try to measure these things. You know,</p> <p>13 there are scales of self-esteem or depression and</p> <p>14 anxiety scales. You know, I think that the</p> <p>15 richness, though, of the biopsychosocial</p> <p>16 interview in understanding, you know, yes, I'm</p> <p>17 hearing you about your gender identity but</p> <p>18 what -- you know, how does that impact you on a</p> <p>19 day-to-day life?</p> <p>20 Hearing from the patient, hearing from the</p> <p>21 parents, you know, building that relationship</p> <p>22 with the family to understand these challenging</p> <p>23 topics that help to understand if someone meets</p> <p>24 the criteria for the diagnosis of gender</p> <p>25 dysphoria.</p>	<p style="text-align: right;">Page 116</p> <p>1 interview. So if -- you know, if I'm -- you</p> <p>2 know, which is something that, you know, you're</p> <p>3 trained to do as a mental health professional as</p> <p>4 part of your job. But, you know, I would say the</p> <p>5 same way that someone would say, well, I'm kind</p> <p>6 of feeling like this versus I feel like this and</p> <p>7 it's really affecting me, you know. You assess</p> <p>8 these clinical criteria based on your interview</p> <p>9 with the patient.</p> <p>10 Q So -- I don't know. I'm imagining some patients</p> <p>11 maybe they'll have a strong desire to be rid of</p> <p>12 secondary sex characteristics but not primary sex</p> <p>13 characteristics. Does that ever happen?</p> <p>14 MR. SELDIN: Object to form.</p> <p>15 A That could certainly be the case for a particular</p> <p>16 patient. I think when we're talking about</p> <p>17 these -- each of these lines here, I believe this</p> <p>18 is -- like, in part A of the DSM criteria,</p> <p>19 there's six sub criteria that need -- that two of</p> <p>20 them need to be met. So, you know, that doesn't</p> <p>21 necessarily mean that everyone has all of these</p> <p>22 features to meet criteria for gender dysphoria.</p> <p>23 But, yes, someone could have a stronger --</p> <p>24 could have stronger distress associated with</p> <p>25 secondary sex characteristics than primary sex</p>

<p style="text-align: right;">Page 117</p> <p>1 characteristics, certainly.</p> <p>2 Q Would that patient be a good candidate for</p> <p>3 pubertal suppression or cross-sex hormones?</p> <p>4 MR. SELDIN: Object to form.</p> <p>5 A They certainly could if they met criteria for</p> <p>6 gender dysphoria and after, you know, review of</p> <p>7 risks and benefits with this particular patient,</p> <p>8 you know, that -- a patient like that could</p> <p>9 certainly benefit from intervention in your</p> <p>10 hypothetical.</p> <p>11 Q My hypothetical, just so we're clear, being a</p> <p>12 strong desire to be rid of secondary sex</p> <p>13 characteristics but not a strong desire to be rid</p> <p>14 of primary sex characteristics.</p> <p>15 A Right. So the desire to be rid of primary sex</p> <p>16 characteristics is not a required element of</p> <p>17 making the diagnosis of gender dysphoria.</p> <p>18 Q And not just that, but of prescribing and being</p> <p>19 on pubertal suppressants or cross-sex hormones?</p> <p>20 A Correct.</p> <p>21 Q Okay. Do you have a general protocol that you</p> <p>22 use in your clinic for treating gender dysphoria?</p> <p>23 A Yes.</p> <p>24 Q What is that protocol?</p> <p>25 A So in our clinic, a patient will oftentimes be</p>	<p style="text-align: right;">Page 119</p> <p>1 phase.</p> <p>2 So in assessment, then, the patient would be</p> <p>3 seen by one of our mental health professionals,</p> <p>4 patient and family, to gather more information</p> <p>5 over time about the child's gender identity, also</p> <p>6 their social history, their family history, you</p> <p>7 know, getting a real -- a really comprehensive</p> <p>8 overview of what's going on with this child and</p> <p>9 family. The ultimate goal of that -- one of the</p> <p>10 ultimate goals of that assessment is to determine</p> <p>11 whether the child meets the criteria for gender</p> <p>12 dysphoria.</p> <p>13 And then there might -- then at the end of</p> <p>14 that assessment phase, the mental health</p> <p>15 professionals will provide recommendations,</p> <p>16 recommendations to the family, you know; for</p> <p>17 example, you know, these resources might be</p> <p>18 helpful, you know. The recommendation also might</p> <p>19 be that, you know, seeing one of them -- the</p> <p>20 medical doctors on the team would be an advised</p> <p>21 next step for your particular situation.</p> <p>22 If a medical visit is then set up, then</p> <p>23 myself or one of our other providers would see</p> <p>24 the patient and family and continue to gather</p> <p>25 history and learn about the patient's experience</p>
<p style="text-align: right;">Page 118</p> <p>1 referred by their primary care doctor or a mental</p> <p>2 health professional. The next thing that happens</p> <p>3 is a triage phone call is set up with one of our</p> <p>4 mental health professionals and the parent. And</p> <p>5 the purpose of that triage phone call is to</p> <p>6 better understand why the referral was made.</p> <p>7 Right?</p> <p>8 So that sometimes the referral is made</p> <p>9 simply because the parent is needing some</p> <p>10 resources to help with their child's safety at</p> <p>11 school. For example, their child is getting</p> <p>12 bullied, and they wanted to know how we might be</p> <p>13 able to help with that. And so our social worker</p> <p>14 might, you know, provide resources to that family</p> <p>15 to assess with that.</p> <p>16 Other times they're looking for mental</p> <p>17 health resources in their local area, and so we</p> <p>18 can connect them with those services.</p> <p>19 Sometimes the triage phone call elicits that</p> <p>20 the parent and patient are concerned that the</p> <p>21 patient does indeed have gender dysphoria, or</p> <p>22 maybe without using those words they're saying my</p> <p>23 child is really struggling with their gender</p> <p>24 identity, and that in that situation, the next</p> <p>25 step would be participating in an assessment</p>	<p style="text-align: right;">Page 120</p> <p>1 with gender identity.</p> <p>2 We'll have had the advantage of, you know,</p> <p>3 having learned a lot about the patient through</p> <p>4 reading the -- reading the assessment from our</p> <p>5 mental health provider and talking to the mental</p> <p>6 health provider about their experience with the</p> <p>7 patient and family.</p> <p>8 And then in the course of that medical</p> <p>9 visit, discussions about medical interventions,</p> <p>10 and in thinking about those medical</p> <p>11 interventions, they're relying on guidance from</p> <p>12 the WPATH Standards of Care 8 and the Endocrine</p> <p>13 Society Clinical Practice Guidelines.</p> <p>14 And -- and then if a patient is on some sort</p> <p>15 of medical intervention, then monitoring that</p> <p>16 patient over time and continuing to follow up</p> <p>17 with that patient through the course of</p> <p>18 treatment.</p> <p>19 Q Does that break down into roughly four stages:</p> <p>20 Triage, assessment, medical, and then monitoring?</p> <p>21 A I think that seems like a decent way to parse it</p> <p>22 out, sure.</p> <p>23 Q Okay. And then the assessment phase, that is, as</p> <p>24 I understand it, what you referred to earlier as</p> <p>25 kind of the psychosocial evaluation, is that's</p>

<p style="text-align: right;">Page 121</p> <p>1 what's going on there?</p> <p>2 MR. SELDIN: Object to form.</p> <p>3 A Yes. So I would say the -- I think how -- how</p> <p>4 our -- our social worker describes it as a</p> <p>5 biopsychosocial assessment --</p> <p>6 Q Biopsychosocial. Okay.</p> <p>7 A -- which is, I think, just a fancy way of saying</p> <p>8 learning everything there is to learn about this</p> <p>9 patient's understanding of gender identity and</p> <p>10 also getting a good sense of other aspects of</p> <p>11 their life.</p> <p>12 Q How long does that process take, that assessment?</p> <p>13 A So the first visit with the social worker is</p> <p>14 typically scheduled for three hours, and then</p> <p>15 based on that visit, you know, the social worker</p> <p>16 could determine what further visits are required</p> <p>17 for the assessment.</p> <p>18 Q But it could be only one three-hour visit, and</p> <p>19 then it gets forwarded to you for a medical</p> <p>20 visit?</p> <p>21 MR. SELDIN: Object to form.</p> <p>22 A You know, it really depends. I think sometimes</p> <p>23 patients coming in already have had an assessment</p> <p>24 with a treating therapist that they've known for</p> <p>25 several years and are coming with, for example, a</p>	<p style="text-align: right;">Page 123</p> <p>1 able to go through everything that I wanted to go</p> <p>2 through to understand you so let's set up another</p> <p>3 visit at my next available appointment.</p> <p>4 So, you know, I think it -- it's -- you</p> <p>5 know, I think that it's -- when we're dealing</p> <p>6 with individual people here in medicine, it's not</p> <p>7 so much, like, you know, triage, done;</p> <p>8 assessment, bing; visit, check mark. You know,</p> <p>9 every single person requires a lot of individual</p> <p>10 thought, you know. How can I -- what is this</p> <p>11 person telling me about themselves? How can I</p> <p>12 help them? And, you know, what are some barriers</p> <p>13 to care? What -- what is unique about this</p> <p>14 person that allows us -- that requires time for</p> <p>15 considering X, Y, or Z?</p> <p>16 So when you say "protocol" -- right -- I can</p> <p>17 say that we have some sort of a protocol which</p> <p>18 involves those sort of four phases that you</p> <p>19 outlined. But beyond that, the protocol breaks</p> <p>20 down when you're talking about individual people</p> <p>21 and their specific needs.</p> <p>22 Q Do you track data for how long people -- how long</p> <p>23 your patients take from triage through the</p> <p>24 medical visit?</p> <p>25 MR. SELDIN: Object to form.</p>
<p style="text-align: right;">Page 122</p> <p>1 letter from the summary of the biopsychosocial</p> <p>2 assessment that's already been done by someone</p> <p>3 that's known them for a long time. So in that</p> <p>4 situation, oftentimes the one visit with our</p> <p>5 social workers is all that's required to sort of</p> <p>6 confirm. But in other situations, subsequent</p> <p>7 visits are necessary.</p> <p>8 Q Do you have a sense for sort of an average?</p> <p>9 MR. SELDIN: Object to form.</p> <p>10 A An average number of visits with the social</p> <p>11 worker?</p> <p>12 Q Yes. Before the medical visit.</p> <p>13 A It's very individualized but, you know, somewhere</p> <p>14 between one and two visits on average.</p> <p>15 Q Over how many weeks or months would those one or</p> <p>16 two visits likely occur?</p> <p>17 A I think it's really variable. Right? So, like,</p> <p>18 for example, at an initial assessment visit with</p> <p>19 the social worker, the recommendation might be,</p> <p>20 you know, I want you to, you know, continue to</p> <p>21 evaluate and explore your gender identity working</p> <p>22 with, you know a local mental health provider for</p> <p>23 the next year. And then we'll set up a return</p> <p>24 visit.</p> <p>25 Or it could be, you know, we haven't been</p>	<p style="text-align: right;">Page 124</p> <p>1 A I don't formally track data, but, you know, I</p> <p>2 work there and can give estimates about how long</p> <p>3 things take.</p> <p>4 Q So how long do you think it takes on average from</p> <p>5 triage to medical visit?</p> <p>6 A Probably four to eight months.</p> <p>7 Q Is it -- if there's going to be maybe -- strike</p> <p>8 that.</p> <p>9 Do you ever prescribe either pubertal</p> <p>10 suppressants or hormones at the first medical</p> <p>11 visit?</p> <p>12 MR. SELDIN: Objection to form.</p> <p>13 A Yes.</p> <p>14 Q Okay. So the monitoring, tell me about how</p> <p>15 frequently you are monitoring your patients where</p> <p>16 there's a medical intervention.</p> <p>17 A Typically I see patients every three months.</p> <p>18 Q Through their 18th birthday, or for how long?</p> <p>19 A Every three months over the first year of</p> <p>20 treatment for sure. And then, like I say,</p> <p>21 because everyone is so individual and different,</p> <p>22 you create a plan as to what follow-up looks like</p> <p>23 moving forward.</p> <p>24 So I have some patients that are, you</p> <p>25 know -- that are doing so well that our visits</p>

<p style="text-align: right;">Page 125</p> <p>1 are -- are relatively straightforward, and we 2 might space their visit out to every six months 3 after, you know, two or three years of treatment, 4 other patients that we're seeing more frequently 5 and keeping it every three months. 6 So it's, you know -- I find it helpful to 7 set up an expectation for every three months, but 8 then, you know, if someone doesn't require that, 9 those every three-month visits, then the ability 10 to space that out. 11 I'll follow patients usually past their 18th 12 birthday. I think that, you know, this is a 13 common problem in pediatrics. We don't want to 14 get -- let go of our patients to adult care. 15 And, you know, I think for, again, individual 16 reasons there's different reasons why people 17 might prefer to stay with the pediatric provider 18 for a little longer versus going to their adult 19 provider. Maybe they're finishing up college and 20 then moving to a different city. So that's a, 21 you know, relatively straightforward time to make 22 that change. Other people who are kind of just, 23 you know, maybe hanging around here, I might try 24 to transition somewhere between age 18 and 21 to 25 an adult provider in our community.</p>	<p style="text-align: right;">Page 127</p> <p>1 MR. SELDIN: Object to form. 2 A Well, of course, this isn't unique to just 3 pediatric endocrinology or gender dysphoria, but 4 I think adults have different problems than kids 5 in a whole host of manners. So, you know, 6 there's -- I think adult doctors are better than 7 pediatricians at assessing and treating for 8 sexually transmitted infections, for example, or 9 counseling on breast cancer screening or prostate 10 exams, you know. 11 I think that transgender adults are adults, 12 and an adult wouldn't see a pediatrician for any 13 of their medical problems. 14 Q When you talk about, though, transitioning your 15 patients particularly for their gender dysphoria, 16 are you talking about transitioning them to other 17 endocrinologists that treat adults or just other 18 practitioners? 19 MR. SELDIN: Object to form. 20 A So in our community there's a host of different 21 providers from different specialties that have 22 expertise in gender-affirming care. So in our 23 community here patients may choose to see an 24 adult endocrinologist, an adult gynecologist, 25 family medicine doctor, internal medicine</p>
<p style="text-align: right;">Page 126</p> <p>1 Q But do you think it's important eventually to 2 transition them to an adult provider? 3 A I do. 4 Q Why is that? 5 A Well, one reason is that adult transgender 6 individuals have more options for care. So in -- 7 if you're a pediatric patient, there's only, you 8 know -- there's limited access to 9 gender-affirming care providers. And so if I 10 kept all of my patients into adulthood, then 11 there would be no availability for new pediatric 12 patients. 13 But I think more importantly, pediatricians 14 don't take care of adults in any -- don't take 15 care of their patients all the way through their 16 life for any medical problem, that when you're an 17 adult, there's other things that adult doctors 18 are better at than pediatric doctors. And so 19 using their expertise is -- is just how medicine 20 works. 21 Q For somebody who's experiencing gender dysphoria, 22 what form might that take? What might that look 23 like if somebody has -- is an adult and has -- I 24 don't know -- issues that you don't feel equipped 25 to deal with as a pediatric provider?</p>	<p style="text-align: right;">Page 128</p> <p>1 doctors. There's high-quality experts in 2 gender-affirming care in all of those fields in 3 southeast Michigan. 4 Q What are you looking for in the monitoring 5 visits? 6 A Well, I think that if I take a step back for a 7 second, what is the goal of care? Right? When 8 I'm seeing a patient for gender dysphoria or any 9 medical problem, the goal is to improve the 10 patient's health and quality of life. 11 With gender dysphoria specifically, you 12 know, by improving gender dysphoria, my hope is 13 that -- the ultimate goal is that the patient is 14 living a happier, healthier, more successful 15 life, more confident, more comfortable in their 16 own skin, more comfortable in the world. 17 So ultimately the answer to your question is 18 what are we monitoring? We're monitoring to see 19 how that's going. Right? That if a treatment 20 has been started, then -- you know, sometimes I 21 say -- sometimes I say to patients, like, okay, 22 the goal of testosterone for you. And their 23 answer is, "I want my voice to be deeper because 24 that's going to be make me feel more comfortable 25 using my voice."</p>

<p style="text-align: right;">Page 129</p> <p>1 And I say, "Well, that's a good goal, but, 2 really, my goal is that I want this intervention 3 to help you to be the healthiest, happiest person 4 that you can be." And that -- so I always kind 5 of circle back to that. 6 So when I'm seeing someone back in 7 follow-up, I -- the very first question that I 8 always ask if someone's on treatment of some 9 sort, for example -- well, the very first 10 question I ask is to make sure that I'm 11 addressing them using the correct name and 12 pronouns, and then subsequently my next question 13 is to ask them if they feel like the treatment 14 that they're on is still something that makes 15 sense for them to be on, is it something they'd 16 like to continue. 17 Because with any medical intervention, that 18 you make a decision at one point in time, and 19 then you're constantly reevaluating that plan, 20 whether you're starting a thyroid medicine or 21 antidepressant at the subsequent visit. You're 22 saying, "Okay. This was what our plan was at the 23 last visit. How did it go since last time? Do 24 you feel like we're on the right track? Is the 25 treatment that you're on still helping?"</p>	<p style="text-align: right;">Page 131</p> <p>1 or change how we're administering the medication 2 in any particular way, and then at the end of 3 that visit coming up with a plan. 4 The patient leaves with that plan, and then 5 at the subsequent visit back to the start. 6 Right? We left the last visit with the plan. 7 How did it go in between visits? Do you feel 8 like we're on the right track with our current 9 plan? 10 Q Do you have any patients that tell you, "No, I 11 don't want to continue with treatment"? 12 A I have had patients that have discontinued 13 treatment before. 14 Q Do you have a sense for how many? 15 A You know, I can think of four or five. I think 16 that, you know, a recent example of a patient 17 that discontinued treatment, had started 18 testosterone and had noticed on the testosterone 19 a deepening of the voice and masculinization of 20 the body. And at one of the subsequent visits, 21 you know, as I am saying, you know, "What have 22 you noticed since last visit," they said, you 23 know, "I've noticed X, Y, and Z. I'm really 24 happy with those changes, and I think that this 25 is where I'd like to stay." And they said that,</p>
<p style="text-align: right;">Page 130</p> <p>1 After that, you know, once we've established 2 that continuing on a certain treatment is 3 indicated, then my next question is, "Okay. Is 4 the dose that I prescribed the right dose?" And 5 so I think there's a lot of different factors 6 that go into that question. 7 I think of it as sort of four things in 8 treatment of gender dysphoria. One is are the 9 changes that were expected and desired occurring. 10 Number two is are the characteristics or physical 11 changes that are undesired not happening. Right? 12 So, example, menstrual periods for a trans man. 13 Number three, is there anything that you've 14 noticed taking the medication that you would not 15 say is a positive? For example, acne, with 16 someone on testosterone, is your acne getting 17 hard to control. And number four is what do the 18 blood levels tell us regarding your dose. So 19 following labs, such as hormone levels and other 20 metabolic parameters. 21 And using all of those four factors 22 together, then using -- sort of using all of 23 those factors to then say, okay, yes, we've 24 established that we're going to continue 25 treatment, and now do we need to adjust the dose</p>	<p style="text-align: right;">Page 132</p> <p>1 you know, in the course of treatment with 2 testosterone, they have a better understanding of 3 their gender identity as nonbinary masculine. 4 So what that meant to them was they liked 5 to -- they feel better presenting themselves as a 6 masculine person but continuing to masculinize 7 wouldn't cause -- wouldn't result in further 8 improvement in gender dysphoria, that the 9 treatment that had occurred up to this point was 10 helpful, and that's where they wanted to stop. 11 Similarly to someone who benefit -- may 12 benefit from social transition but doesn't 13 require medical transition. Right? So, you 14 know, I think that we can think of these 15 gender-affirming care interventions as tools in 16 our tool kit to address someone's gender 17 dysphoria, but then constantly reevaluating, you 18 know, where are we now? What are our subsequent 19 goals? Do our goals today -- how do they align 20 with our goals from the last visit? Have we 21 achieved our goals? And, you know, let's make a 22 new plan each time. 23 Q I'm going to switch gears now just a little bit. 24 What is precocious puberty? 25 A It's puberty that begins at an age that's younger</p>

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1 than normal.

2 **Q Is it the same thing as being transgender or**

3 **having gender dysphoria?**

4 MR. SELDIN: Object to form.

5 A It is not the same thing, no.

6 **Q Is precocious puberty correlated with being**

7 **transgender or having gender dysphoria?**

8 MR. SELDIN: Object to form.

9 A Not that I'm aware of.

10 **Q How is precocious puberty treated?**

11 A Well, precocious puberty can be treated in a

12 variety of different ways, but one -- one common

13 treatment approach to treating precocious puberty

14 is the use of GnRH agonists.

15 **Q Okay. What does that do?**

16 A So in our -- it's kind of -- puberty is a really

17 fascinating endocrine process. Now you're

18 getting me excited to talk about endocrinology

19 for a second, so --

20 MR. SELDIN: Now, Mr. Fisher, you're going

21 to want to hear everything about this so --

22 MR. FISHER: Uh-oh. I'm going to regret

23 this. No.

24 BY MR. FISHER:

25 **Q Go ahead.**

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1 A It's interesting because puberty is a process

2 where all these systems in our brain are doing

3 nothing throughout childhood, and then all of a

4 sudden the hypothalamus starts making a hormone

5 signal called GnRH, gonadotropin-releasing

6 hormone, and releases it in pulses.

7 And the pulses of GnRH tell the next part of

8 the brain, the pituitary gland, to make

9 luteinizing hormone and follicle stimulating

10 hormone, LH and FSH, pulses. And that LH and FSH

11 then tells the testes or ovaries to make

12 puberty-related hormones.

13 So how GnRH agonists work -- an agonist is

14 something that is similar to. Right? So you

15 would say, hmmm, GnRH agonist, wouldn't that make

16 puberty happen more? But, no. If you're giving

17 GnRH as a stable dose, you're interfering with

18 the pulses, and you need the pulses for LH and

19 FSH to be made in pulses.

20 So you're basically using a hormone that's

21 currently already there, but instead of pulsing,

22 giving a stable -- in a stable way, and that

23 interferes with the production of LH and FSH.

24 The end result being that you stop making puberty

25 hormones from the testes and ovaries.

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1 **Q Is that the only treatment, the GnRH agonists?**

2 A For precocious puberty?

3 **Q Yes.**

4 A No. I think -- well, you know, precocious

5 puberty by definition is, you know, puberty in

6 someone assigned female at birth prior to age 8,

7 puberty in someone assigned male at birth prior

8 to age 9. Not everyone with precocious puberty

9 requires treatment, you know. If -- if, for

10 example, someone assigned female at birth is 7

11 and a half and they're starting puberty, you

12 know, you think, well, why would we want to

13 treat? You could treat for social concern of

14 starting puberty that young or to preserve final

15 height, for example.

16 But oftentimes, you know, patients and

17 families in discussion with their endocrinologist

18 may decide, you know, we'll just let puberty

19 happen a little early assuming that it's not

20 being caused by some pathologic problem.

21 And, you know, in the past people would

22 treat precocious puberty with other hormones like

23 progesterone. But, you know, I think in terms of

24 medical treatment, I would say GnRH agonist is

25 the most common treatment for precocious puberty.

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1 **Q How early have you seen precocious puberty start?**

2 A Less than 1.

3 **Q And I assume in that context, it would be**

4 **important to treat the precocious puberty with a**

5 **GnRH agonist?**

6 A Yes.

7 **Q Why is that?**

8 A Well, I think there's several reasons. One is

9 that, you know, if you have -- let's say, for

10 example, a 3-year-old, you know, if you have

11 precocious puberty when you're that young,

12 usually it's being caused by some other

13 pathology, like a brain tumor or something like

14 that. But, regardless, if you go through puberty

15 at age 3, then you're going to go through a fast

16 growth spurt. You're going to be the tallest

17 3-and-a-half-year old, an extremely tall

18 4-year-old. Then you're going to be done growing

19 because you've already completed your growth

20 spurt, and then you're going to be a very short

21 adult. So going through puberty very young

22 confers a risk for short stature.

23 I think also from social reasons, you know,

24 being the only kindergartener that has completed

25 puberty would be challenging from a social

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1 standpoint.

2 Q Okay. Paragraph 36 in your report says, "Based

3 on longitudinal data and my own clinical

4 experience, when transgender adolescents are

5 provided with appropriate medical treatment and

6 have parental and social support, they are more

7 likely to thrive and grow into healthy adults."

8 And then you cite the de Vries study from 2014.

9 And I'm wondering, first of all, what you

10 mean there by "appropriate medical treatment."

11 A I would say that I mean that when a person is

12 assessed to have the diagnosis of gender

13 dysphoria and counseled on medical options, that

14 when the result of those discussions result in,

15 you know, the treatment with medications such as

16 GnRH agonists or gender-affirming hormones, that

17 there's a favorable outcome compared to no

18 treatment.

19 Q But, and then you say, "and have parental and

20 social support." So I'm wondering if the

21 likelihood of transgender minors thriving and

22 growing into healthy adults is more dependent on

23 the parental and social support or on the

24 appropriate medical treatment.

25 MR. SELDIN: Object to form.

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1 A You're wondering about that, or you're asking me

2 what I think about that?

3 Q Yeah. Yeah. I'm asking. Yeah, that's a way of

4 asking you. Is it more dependent on that?

5 A Oh.

6 Q Which is it more dependent on?

7 A Right. So, you know, I think that that's a

8 question that requires a lot of careful

9 investigation -- right? -- because we're trying

10 to separate these two really important things.

11 So, you know, I think that we have evidence

12 to suggest that both of those are very important.

13 So, for example, on the parental and social

14 support side, that data from Christina Olson, I

15 believe, demonstrated that, you know, the -- for

16 example, prepubertal children with a high degree

17 of parental support and community support had

18 similar rates of anxiety and depression as their

19 controlled siblings, for example. Whereas the

20 general population of youth that are transgender

21 have worse -- or higher incidence of co-morbid

22 mental health problems.

23 So that's just one example of a study

24 demonstrating that, yes, parental support and

25 social support have an impact on how a

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1 transgender child is able to thrive, which I

2 think also makes some intuitive sense.

3 Then, you know, what about medical

4 treatment? How can we isolate that? Right? So

5 I think that's a harder one -- right? -- because

6 as we talked about, we can't do that randomized

7 control trial with gender-affirming care either,

8 that -- that for reasons that I mentioned before,

9 you know, first of all, you wouldn't be able to

10 randomize and blind the study. You couldn't

11 assign people to pubertal blockers and no puberty

12 blockers because people would realize that

13 they're not on the real medicine because they're

14 going through puberty.

15 And you can't expect people to sign up for a

16 study that they don't believe has scientific

17 equipoise, meaning that most people would think

18 that participating in the treatment arm would be

19 beneficial than the control arm, so no one would

20 sign up. You wouldn't be able to see those

21 patients across enough time to make the

22 randomized control study meaningful.

23 So then we have to approach this question

24 that you're asking in a different way. That, you

25 know, we have other ways that we can investigate

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1 scientific questions, such as a longitudinal

2 study, such as retrospective studies, such as

3 shorter, more discrete questions in a

4 longitudinal study, like before and after one

5 specific intervention.

6 And so those are the types of studies that

7 help to inform the fact that, yes, appropriate

8 medical treatment does have positive impact on

9 people with gender dysphoria.

10 Q Paragraph 37 -- let's see. Oh, I see. Yes. It

11 says -- so you want a comprehensive

12 biopsychosocial assessment, which you mentioned

13 earlier, first step, "performed by a provider

14 with experience in gender identity."

15 How much experience in gender identity

16 should a provider conducting a comprehensive

17 biopsychosocial assessment have?

18 MR. SELDIN: Object to form.

19 A Well, I think that every mental health

20 professional has a degree because they've gone

21 through some sort of rigorous training program.

22 Right? That with -- whether you're a social

23 worker, a psychologist, psychiatrist, you know,

24 as part of the credentialing that you receive

25 implies that you've gone to a school that is

<p style="text-align: right;">Page 141</p> <p>1 capable of licensing you in your field.</p> <p>2 And so, you know, while I'm not familiar</p> <p>3 with all of the credentialing rules for different</p> <p>4 fields, that those rules are designed to imply</p> <p>5 that someone that's completed that degree has the</p> <p>6 skills needed to perform a biopsychosocial</p> <p>7 assessment of a person for any particular reason;</p> <p>8 that, I think, experience in gender identity, you</p> <p>9 think, I think that people gain that by, you</p> <p>10 know, reading, by reading articles in their field</p> <p>11 on gender identity, maybe by observing others,</p> <p>12 maybe by attending a formal course.</p> <p>13 But I think that, you know, we don't --</p> <p>14 there isn't a, you know -- a stamp of approval</p> <p>15 that you have, like, now I have -- I have enough</p> <p>16 experience in gender identity that I can diagnose</p> <p>17 gender dysphoria, just like there's not a similar</p> <p>18 stamp for a mental health professional to</p> <p>19 diagnose, you know, major depressive order.</p> <p>20 I think that healthcare professionals are,</p> <p>21 though, however, trained to become competent in</p> <p>22 understanding how to use the diagnostic and</p> <p>23 statistical manual, and that skill certainly is</p> <p>24 helpful in gaining experience in making the</p> <p>25 diagnosis of gender dysphoria.</p>	<p style="text-align: right;">Page 143</p> <p>1 standpoint, that if someone is diagnosing someone</p> <p>2 with gender dysphoria and writing in the letter</p> <p>3 that they're providing related to that</p> <p>4 assessment, that they have expertise in gender</p> <p>5 identity, then that's a part of the professional</p> <p>6 aspect of medicine that allows us to work</p> <p>7 together.</p> <p>8 Q So you would expect that statement to be in some</p> <p>9 kind of a letter that you get from somebody who's</p> <p>10 done that assessment, that they state their</p> <p>11 background and make that representation that they</p> <p>12 have experience in gender identity?</p> <p>13 MR. SELDIN: Object to form.</p> <p>14 A I think different people do it different ways.</p> <p>15 You know, I think that in our clinic, we don't</p> <p>16 rely on letters so much because we have in-house</p> <p>17 assessment. I think other providers may use</p> <p>18 letters from mental health professionals.</p> <p>19 Others, you know, may set up their system of</p> <p>20 assessment in different ways. But it is a common</p> <p>21 approach to, you know, describe -- describe</p> <p>22 yourself and your practice when you're providing</p> <p>23 a letter regarding a certain type of care.</p> <p>24 Q I've gotcha. So paragraph 57 of your report, and</p> <p>25 here we're talking about the initiation of GnRHa</p>
<p style="text-align: right;">Page 142</p> <p>1 Q So is every medical health professional meeting</p> <p>2 the definition of experience in gender identity</p> <p>3 that you describe in paragraph 37?</p> <p>4 MR. SELDIN: Object to form.</p> <p>5 A I would imagine that not every healthcare</p> <p>6 professional would describe themselves as</p> <p>7 experienced in gender identity, no.</p> <p>8 Q Well, is that all that matters, is how they</p> <p>9 describe themselves?</p> <p>10 A Well, I think if someone is saying that they're</p> <p>11 competent in an area of practice that they're not</p> <p>12 competent in, then that's a different problem</p> <p>13 altogether. Right? So if I was to start</p> <p>14 treating someone for Crohn's disease as a</p> <p>15 pediatric endocrinologist, you know, I can</p> <p>16 because I have a medical license, but I'm not a</p> <p>17 pediatric gastroenterologist, so I wouldn't</p> <p>18 really feel comfortable doing that. You know,</p> <p>19 could I open a private practice and treat Crohn's</p> <p>20 disease? Sure. But I don't think I would be</p> <p>21 very effective.</p> <p>22 And so, no, there's no -- there's nothing</p> <p>23 that's legally getting in the way of someone with</p> <p>24 a certain degree of claiming to be something</p> <p>25 they're not. But I think from an ethical</p>	<p style="text-align: right;">Page 144</p> <p>1 which another term for that is puberty blockers I</p> <p>2 think maybe we've talked about. Is that</p> <p>3 accurate?</p> <p>4 A That's right.</p> <p>5 Q Yeah. So part of that -- so prior to the</p> <p>6 initiation of that, the providers counsel</p> <p>7 patients and their families extensively on the</p> <p>8 potential benefits and risks. And I'm wondering</p> <p>9 what the potential risks of starting puberty</p> <p>10 blockers is that you -- that's important for</p> <p>11 providers to counsel patients about.</p> <p>12 A Yeah. So I think that the -- I think in order to</p> <p>13 frame that conversation, we have to just remind</p> <p>14 ourselves about the purpose of prescribing the</p> <p>15 pubertal suppression.</p> <p>16 The purpose is that the patient is in</p> <p>17 puberty and that continued progression further</p> <p>18 into puberty has the potential to cause an</p> <p>19 increase in distress or worsening gender</p> <p>20 dysphoria and that the development of those</p> <p>21 secondary sex characteristics may make it more</p> <p>22 challenging for that person now and into the</p> <p>23 future.</p> <p>24 So we're using the GnRH agonists to stop</p> <p>25 that progression. With any medication there's,</p>

<p style="text-align: right;">Page 145</p> <p>1 you know, potential risks. I would say that the 2 most common adverse reaction that I see with GnRH 3 agonists is pain at the injection site. I most 4 often use injectable Lupron or leuprolide as a 5 GnRH agonist. And so every three months the 6 patient gets that medication administered 7 intramuscularly, and pain at the injection site 8 or sometimes local site reaction or bleeding can 9 occur, that the -- the side effects of GnRH 10 agonists, oftentimes you can think about it like, 11 well, are the side effects of not going through 12 puberty right now. Right? Well, not going 13 through puberty is the intended effect, but 14 puberty is more than just developing facial hair 15 or breasts. Right? There's other things that 16 happen during puberty, such as you go through a 17 growth spurt. 18 So on GnRH agonists, someone will continue 19 to grow. Every year a child gets a little bit 20 taller, from 5 to 6 to 7 to 8, every year a 21 little bit taller at a prepubertal speed. If 22 someone's on GnRH agonists, they'll continue to 23 grow taller every year, but it will continue to 24 be at a prepubertal speed. That at some point 25 that child will go through puberty, and at that</p>	<p style="text-align: right;">Page 147</p> <p>1 bone density spurt. 2 That the -- I think a really important topic 3 to talk to patients about is, you know, what we 4 know and what we don't know about how 5 gender-affirming care may or may not impact 6 fertility. 7 So, for example, GnRH agonists themselves 8 have no impact on fertility. Right? That if we 9 think back to their use in precocious puberty, 10 you hold off someone's puberty when it's time for 11 puberty to commence. The medication is stopped, 12 and so people treated with GnRH agonists have no 13 difference in fertility as adults. 14 That being said, endogenous puberty to a 15 certain degree is important for the ability to 16 produce sperms or eggs using one's body. So that 17 GnRH agonists themselves do not affect fertility, 18 but if that person is going to go from GnRH 19 agonists to hormonal interventions later in 20 adolescence, then we still have not progressed 21 into puberty far enough perhaps to have sperm or 22 eggs available for use or preservation. That 23 person will at some point need to go through 24 endogenous puberty if they would like to attempt 25 fertility.</p>
<p style="text-align: right;">Page 146</p> <p>1 time they will go through their growth spurt. 2 And so we are sort of delaying the growth 3 spurt. So I think that you could consider that a 4 side effect. We don't need the person's growth 5 spurt to be delayed. That's not why we're using 6 the medicine. We're using it for delaying the 7 development of secondary sex characteristics. 8 But, consequently, we're also delaying their 9 growth spurt. 10 I think in a similar way we think about bone 11 density development. So every year a child's 12 bone density gets a little stronger, and that 13 would be occurring at a prepubertal speed. 14 During puberty, whether it's puberty from 15 testosterone or from estrogen, our bone density 16 gets stronger faster. I sometimes call that the 17 bone density spurt, in relation to a growth 18 spurt. 19 And so if you're using a GnRH agonist, your 20 bones are going to continue to get a little 21 stronger just as they have been every subsequent 22 year, but it's not until you go through puberty, 23 either by discontinuing the GnRH agonist or 24 starting gender-affirming hormones, that you'll 25 have that bone density spurt. We're delaying the</p>	<p style="text-align: right;">Page 148</p> <p>1 So while GnRH agonists themselves don't 2 impact fertility, I like to have conversations 3 about that topic sort of earlier on in the 4 process of talking about these medical 5 interventions as we're sort of outlining sort of 6 future goals -- potential future goals and plans. 7 I think that those are some of the major 8 focus points that I discuss with patients with 9 respect to GnRH agonists. But open to any 10 follow-up there. 11 Q I'm wondering -- I think you maybe touched on 12 this just a little bit, but I'm wondering in 13 general or, I guess, maybe more -- actually not 14 in general -- more specifically, are there ways 15 that pubertal development will be different in a 16 patient -- and here we're not talking about 17 precocious puberty patients. I'm talking about 18 gender dysphoric patients. 19 Pubertal development would be different in a 20 patient after the patient started on puberty 21 blockers? 22 MR. SELDIN: Object to form. 23 A Sorry. Can you -- I think you're trying to 24 describe a hypothetical where you're -- are you 25 starting GnRH agonists and then stopping them and</p>

<p style="text-align: right;">Page 149</p> <p>1 allowing endogenous puberty?</p> <p>2 Q Exactly, yes.</p> <p>3 A Yeah. Yeah. Well, I think one question that a</p> <p>4 lot of people might ask is, you know, does</p> <p>5 puberty resume. Right? Is there a risk of</p> <p>6 puberty not resuming if you start GnRH agonist?</p> <p>7 And the answer is, yes, it resumes. By</p> <p>8 withdrawing from the GnRH agonists, that the</p> <p>9 pulse generator, you know, turns back on, and</p> <p>10 puberty resumes.</p> <p>11 And when that happens, those signals start</p> <p>12 up again. Testosterone or estrogen rises, and</p> <p>13 puberty kind of continues from the place that it</p> <p>14 was at when it was stopped.</p> <p>15 So I think in that respect I would say, no,</p> <p>16 I think that there isn't significant difference</p> <p>17 aside from age when -- if someone were to</p> <p>18 discontinue GnRH agonists and allow for</p> <p>19 endogenous puberty to recommence.</p> <p>20 Q So no difference than if they'd just gone through</p> <p>21 puberty without any agonists -- GnRH agonists?</p> <p>22 A Right. It's shifted in time but I -- yeah, I</p> <p>23 can't think of other significant differences in</p> <p>24 how their puberty would progress.</p> <p>25 Q Do puberty blockers increase brain pressure?</p>	<p style="text-align: right;">Page 151</p> <p>1 Now, I think it was a year ago or so there</p> <p>2 was a report that -- I believe it was six people</p> <p>3 in -- you know, of course, representing a very</p> <p>4 small fraction of the tens of thousands of people</p> <p>5 that have been prescribed GnRH agonists, but six</p> <p>6 people have been reported to have pseudotumor</p> <p>7 cerebri while also being treated with GnRH</p> <p>8 agonists.</p> <p>9 I think sort of the implicit question is --</p> <p>10 well, just like you've been asking me a lot -- is</p> <p>11 it cause or effect, or, you know, is it</p> <p>12 associated or causative? And while it's a little</p> <p>13 bit unclear, I think it was, you know -- you</p> <p>14 know, an important enough finding that the FDA</p> <p>15 announced that these six patients had this</p> <p>16 experience. I think -- I believe five of them</p> <p>17 were using GnRH agonists for precocious puberty</p> <p>18 and one for gender dysphoria.</p> <p>19 Subsequently, I think there was a study in</p> <p>20 Sweden looking at all of the patients in their</p> <p>21 country on GnRH agonists, and they had zero</p> <p>22 people with pseudotumor cerebri and other people</p> <p>23 with pseudotumor cerebri, you know, for unknown</p> <p>24 reasons.</p> <p>25 So I think it's a little bit unclear, but it</p>
<p style="text-align: right;">Page 150</p> <p>1 MR. SELDIN: Object to form.</p> <p>2 A Generally, the answer I would say is no. You</p> <p>3 know, I think that there is a couple -- couple</p> <p>4 relevant articles regarding that question. I</p> <p>5 think you're talking about a phenomenon called</p> <p>6 pseudotumor cerebri.</p> <p>7 So pseudotumor cerebri is basically an</p> <p>8 increase in intracranial pressure because you're</p> <p>9 making too much spinal fluid. So pediatric</p> <p>10 endocrinologists are really familiar with this</p> <p>11 condition because one of our other medications</p> <p>12 that we use a lot has had a known risk for</p> <p>13 pseudotumor cerebri, and that's growth hormone.</p> <p>14 So one of the things that we've known about</p> <p>15 growth hormone is that a very, very small</p> <p>16 percentage of people but, you know, seemingly</p> <p>17 large enough to know that growth hormone can be a</p> <p>18 risk factor, have an increase in intracranial</p> <p>19 pressure usually within the first several months</p> <p>20 of starting growth hormone. And if that does</p> <p>21 occur, then we pause the growth hormone and --</p> <p>22 usually that presents as a headache, that we</p> <p>23 pause the growth hormone, let the issue resolve,</p> <p>24 and then resume the growth hormone at a smaller</p> <p>25 dose.</p>	<p style="text-align: right;">Page 152</p> <p>1 is something that I mention to patients as sort</p> <p>2 of a question that has been raised. I think,</p> <p>3 regardless, I would hope that anyone that's</p> <p>4 experiencing a sudden onset of extreme headache</p> <p>5 would let me know and that -- that being said, I</p> <p>6 haven't had that -- I haven't had a patient that</p> <p>7 has had pseudotumor cerebri from GnRH agonists</p> <p>8 nor do I know of any colleagues that have had</p> <p>9 that occur. But I have had patients with this</p> <p>10 problem on growth hormone and feel comfortable in</p> <p>11 managing it if were to come up.</p> <p>12 MR. FISHER: Okay. I think looking at my</p> <p>13 outline, I probably have a few more questions</p> <p>14 along this line, but let's go ahead and take a</p> <p>15 break, and then we'll come back.</p> <p>16 I just don't think I'm going to get to any</p> <p>17 better breaking point in the next few minutes.</p> <p>18 So let's take five minutes, and we'll be back at</p> <p>19 1:51.</p> <p>20 (Recess taken from 1:46 p.m. to 1:52 p.m.)</p> <p>21 BY MR. FISHER:</p> <p>22 Q Doctor, do puberty blockers limit mental or</p> <p>23 emotional development during, you know, what</p> <p>24 otherwise would be a normal period of puberty?</p> <p>25 MR. SELDIN: Object to form.</p>

<p style="text-align: right;">Page 153</p> <p>1 A They do not.</p> <p>2 Q Let's take a look at paragraph 64. Here we're</p> <p>3 talking about hormone treatment.</p> <p>4 A Yes.</p> <p>5 Q And the last sentence of the paragraph, over on</p> <p>6 page 17 -- there we go -- it says, "If starting</p> <p>7 hormonal care after completing puberty,</p> <p>8 discussion of egg or sperm preservation prior to</p> <p>9 starting treatment is recommended."</p> <p>10 So here we're talking about your</p> <p>11 consultations with those with gender dysphoria</p> <p>12 who may be interested in hormonal treatment.</p> <p>13 And so I'm wondering, why is that important,</p> <p>14 to recommend cryopreservation?</p> <p>15 MR. SELDIN: Object to form.</p> <p>16 A Yes. I'm happy to answer that question. But,</p> <p>17 I'm sorry, can you tell me which paragraph we're</p> <p>18 in so I can just keep up.</p> <p>19 Q Yeah, sorry. Paragraph 64.</p> <p>20 A Okay. Yeah. Next page. Yeah. Okay.</p> <p>21 Q Yeah, it's just on the next page.</p> <p>22 A Okay. Yeah, so, you know, I think as I was</p> <p>23 starting to talk a little bit about with GnRH</p> <p>24 agonists, that you need to go through a certain</p> <p>25 degree of pubertal development to make sperm or</p>	<p style="text-align: right;">Page 155</p> <p>1 then what that person would do is they would come</p> <p>2 off of their testosterone. They would wait for</p> <p>3 their periods to resume. And, you know, we do</p> <p>4 have some data to suggest that a large majority</p> <p>5 of patients will have resumption of their</p> <p>6 menstrual cycle within about six months of</p> <p>7 stopping long-term testosterone treatment, and</p> <p>8 then they can go ahead and attempt fertility. Of</p> <p>9 course, if they were unsuccessful, they could get</p> <p>10 help with fertility from fertility experts.</p> <p>11 But, ultimately, there may be a subset of</p> <p>12 people that are not able to become pregnant or to</p> <p>13 harvest an egg for a pregnancy. You know,</p> <p>14 similarly, even cisgender women who never start</p> <p>15 testosterone, there's a subset of people that are</p> <p>16 not able to conceive or are infertile for some</p> <p>17 reason or another. There's some thought that</p> <p>18 testosterone may impact fertility in some people.</p> <p>19 And so for that reason, you know, I think</p> <p>20 it's important to outline this for patients as</p> <p>21 they're starting testosterone and say, you know,</p> <p>22 while this is the -- "This is what we know about</p> <p>23 this topic. If you're feeling that a potential</p> <p>24 diminishment of your fertility is important to</p> <p>25 you, then another way to help preserve fertility</p>
<p style="text-align: right;">Page 154</p> <p>1 eggs, that when someone is starting</p> <p>2 gender-affirming hormones, you know, the goal of</p> <p>3 those hormones are to raise that hormone level up</p> <p>4 to what's normal for a person -- that person's</p> <p>5 age with sex assigned at birth, congruent with</p> <p>6 that gender identity, and lower the hormone</p> <p>7 levels that they're making down to what's normal</p> <p>8 for that person's sex.</p> <p>9 And in so doing, there's, you know,</p> <p>10 considerations that we think about with respect</p> <p>11 to fertility. So if we take trans men as an</p> <p>12 example -- right? -- that someone's being treated</p> <p>13 with testosterone, we might expect the menstrual</p> <p>14 cycle to be suppressed. And so without having a</p> <p>15 menstrual cycle, someone is less likely to become</p> <p>16 pregnant. Less likely but not impossible --</p> <p>17 right? Every day there's situations where even</p> <p>18 trans men on testosterone is -- becomes pregnant,</p> <p>19 but that -- it's less likely when you're not</p> <p>20 having a regular cycle.</p> <p>21 That if someone down the road that has been</p> <p>22 on testosterone treatments says, "You know what?</p> <p>23 It's the time in my life where I'm thinking about</p> <p>24 my family planning options, and I think using my</p> <p>25 body to make a baby is what I would like to do,"</p>	<p style="text-align: right;">Page 156</p> <p>1 options is to preserve eggs prior to starting</p> <p>2 testosterone."</p> <p>3 I think I could, sort of, say the exact same</p> <p>4 thing, but in reverse, in talking about someone's</p> <p>5 decision to start estrogen and the decision to</p> <p>6 harvest sperm.</p> <p>7 Q Paragraph 69. Let's see. Well, I thought I had</p> <p>8 the right one. I guess -- I thought it was in</p> <p>9 69. I'm not sure if it is. Maybe it is.</p> <p>10 But in general, maybe even if it's not right</p> <p>11 there, are you -- do you think that giving</p> <p>12 testosterone to a natal female who identifies as</p> <p>13 male is the same as giving that hormone to a</p> <p>14 male -- somebody who's a natal male?</p> <p>15 MR. SELDIN: Object to form.</p> <p>16 A Well, what do you mean by "the same"?</p> <p>17 Q Well, are there -- are the risks -- risk and</p> <p>18 benefit profiles the same?</p> <p>19 A Well, I think that we use testosterone in, for</p> <p>20 example, cisgender men typically for something</p> <p>21 called low testosterone, hypoandrogenism.</p> <p>22 We're using testosterone in this context to</p> <p>23 treat gender dysphoria. But in both situations</p> <p>24 the goal is the same, to raise the -- sort of the</p> <p>25 immediate term goal or the physiologic goal is</p>

<p style="text-align: right;">Page 157</p> <p>1 the same, to bring the testosterone level up to</p> <p>2 the normal male range.</p> <p>3 So -- excuse me. So in that respect, it's</p> <p>4 similar. I think that, you know, the -- in other</p> <p>5 respects, it's similar because, you know, with a</p> <p>6 normal male testosterone level, whether you're a</p> <p>7 cisgender man or a transgender man, some of the</p> <p>8 goals may include, you know, going through sex</p> <p>9 typical puberty, masculinizing puberty, and</p> <p>10 having a normal male testosterone level is</p> <p>11 helpful for, you know, cardiovascular functioning</p> <p>12 and energy.</p> <p>13 But, you know, there are some differences as</p> <p>14 well. Right? So, for example, a trans man on</p> <p>15 testosterone were -- may have -- may have a</p> <p>16 uterus, for example. And so when I'm treating a</p> <p>17 trans man with testosterone, one of the</p> <p>18 considerations is, you know, is the testosterone</p> <p>19 helping to also suppress the menstrual cycle?</p> <p>20 Because that's something that's commonly a source</p> <p>21 of distress for trans men. So that's one</p> <p>22 difference.</p> <p>23 I think there's more similarities than</p> <p>24 differences. I think that when I'm -- when I'm</p> <p>25 thinking about some of the risks of testosterone</p>	<p style="text-align: right;">Page 159</p> <p>1 medications is probably subtly different for all</p> <p>2 sorts of different reasons. And so, you know, I</p> <p>3 think that, you know, if we're staying on the</p> <p>4 testosterone example for a second, we know what</p> <p>5 the normal range is for -- for -- the normal</p> <p>6 range of testosterone level is for men. And so</p> <p>7 regardless of how someone is metabolizing it, if</p> <p>8 someone is a slower or faster metabolizer, the</p> <p>9 dose can be adjusted with the goal of maintaining</p> <p>10 a goal range.</p> <p>11 Q Is that the only potential difference, is rate of</p> <p>12 metabolization?</p> <p>13 MR. SELDIN: Object to form.</p> <p>14 A Gosh, I -- I can't think of another difference</p> <p>15 that -- if you're -- you know, I would say that's</p> <p>16 the one that comes to my mind. But if there's</p> <p>17 something that you have on your mind, I'd love --</p> <p>18 I'd be happy to elaborate on it.</p> <p>19 Q You're giving me far too much credit, Doctor.</p> <p>20 MR. SELDIN: He's trying to be helpful,</p> <p>21 Mr. Fisher, whether you believe it or not.</p> <p>22 BY MR. FISHER:</p> <p>23 Q So paragraph 81 of your declaration, you're</p> <p>24 saying -- this is kind of in the middle of the</p> <p>25 paragraph. There's a sentence that says, "Abrupt</p>
<p style="text-align: right;">Page 158</p> <p>1 treatment that I would talk about for both men</p> <p>2 and -- for both cisgender men and transgender</p> <p>3 men, you know, I -- I use the example of baseball</p> <p>4 players that abuse testosterone. Right? So a</p> <p>5 baseball player that's trying to hit more home</p> <p>6 runs, that person is not going to be trying to</p> <p>7 keep their testosterone level in the normal male</p> <p>8 range. They're going to be trying to put it at</p> <p>9 the superman level of testosterone. And that's</p> <p>10 not healthy for that person's blood pressure, not</p> <p>11 healthy for that person's blood sugar. And so</p> <p>12 that person is at risk for health problems</p> <p>13 related to excessively high testosterone.</p> <p>14 So if I'm prescribing testosterone for,</p> <p>15 let's say, a cisgender boy who was born without</p> <p>16 testes or a transgender boy who's going through</p> <p>17 puberty now as an adolescent, then, you know, if</p> <p>18 the testosterone level is excessively high, then</p> <p>19 it needs to be reduced to prevent issues related</p> <p>20 to hyperandrogenism.</p> <p>21 Q In general, do natal males, natal females process</p> <p>22 medications the same way?</p> <p>23 MR. SELDIN: Object to form.</p> <p>24 A I think to a large degree, yes. But I think that</p> <p>25 the -- sort of everyone's metabolism of</p>	<p style="text-align: right;">Page 160</p> <p>1 withdrawal of hormone therapy can cause severe</p> <p>2 physical side effects including hot flashes and</p> <p>3 headaches."</p> <p>4 And I wonder how -- you know, what do you</p> <p>5 mean there by "abrupt"?</p> <p>6 What time period is "abrupt"?</p> <p>7 A Well, you know, I think, if we think about the</p> <p>8 example that I used, hot flashes and headaches --</p> <p>9 you know, we hear the word "hot flashes" a lot.</p> <p>10 What does that really mean? I think it's a</p> <p>11 feeling of, like, discomfort and warmth through</p> <p>12 the body, oftentimes accompanied by a headache.</p> <p>13 And we hear it a lot in the context of menopause.</p> <p>14 Really, a hot -- when I think of what I mean</p> <p>15 by hot flashes, it's those sensations that are</p> <p>16 caused by someone that has an estrogen level</p> <p>17 that's in the normal female range, and then all</p> <p>18 of a sudden it goes down to lower-than-normal</p> <p>19 female range.</p> <p>20 And when that happens, you know, there's</p> <p>21 some discomfort associated in the body that</p> <p>22 oftentimes people describe as a hot flash.</p> <p>23 Q Right. Well, and then in the next sentence, you</p> <p>24 talk about patients who are titrated down, and</p> <p>25 you mention that, well, you're going to see</p>

<p style="text-align: right;">Page 161</p> <p>1 physiological changes inconsistent with gender 2 identity. 3 But when you talk about titrating down, 4 though, how long does that take, to titrate down, 5 so that you wouldn't have -- or, you know, be 6 substantially less likely to have the hot flashes 7 and the headaches? 8 MR. SELDIN: Object to form. 9 A I mean, I think -- I think in your hypothetical 10 we're saying someone is being treated with 11 estrogen, and the goal is to discontinue estrogen 12 without causing physical side effects. So I 13 would -- if that were a situation that was 14 presented to me, then I would create a taper plan 15 over the course of several months. 16 Q How many months? 17 A Gosh, I think it would probably depend on the 18 dose that someone was on to begin with, but I 19 think probably somewhere in the range of two to 20 three months. 21 Q Two to three months. Okay. All right. Let's 22 take a look -- so paragraph 35 of your report. 23 Okay. So you say, "Gender dysphoria is highly 24 treatable and can be effectively managed. If 25 left untreated, it can result in severe anxiety</p>	<p style="text-align: right;">Page 163</p> <p>1 referring to, for example, grade criteria, I 2 think that -- that every study that's not -- and 3 I may have this a little bit wrong. Every study 4 that's not a randomized control trial 5 automatically starts as low quality and then can 6 be modified based on other factors like sample 7 size. 8 So I don't know how a grade committee would 9 grade this particular article in terms of 10 quality. But as a layman's use of the word 11 "quality," I think this -- this paper's quality 12 in the fact that it, you know, looks at a 13 relatively large sampling of transgender young 14 adults and adolescents, that it has a decent 15 attempt to include people of different races and 16 ethnic youth groups, and that they're able to 17 track some mental health indicators -- or assess 18 mental health indicators that can be challenging 19 to measure outside of sort of a large health 20 system like Fenway Health here. 21 Q So this compared, I think it says, on the -- 22 under the "Results" there -- 23 MR. FISHER: Probably need to pull back a 24 little bit there, Shawn. We can't quite see the 25 whole page. There we go.</p>
<p style="text-align: right;">Page 162</p> <p>1 and depression, eating disorders, substance 2 abuse, self-harm and suicidality," citing Reisner 3 from 2015. 4 So let's take a look, then, at Exhibit 13, 5 which should be this Reisner study. 6 (Shumer Exhibit 13 marked.) 7 Q Is this the Reisner study that you cite in 8 paragraph 35 of your report? 9 A Yes. 10 Q All right. What is this study purporting to tell 11 us? 12 MR. SELDIN: Object to form. 13 A So I think that the study is primarily included 14 to just establish that the trans youth have 15 disproportionately high degrees of some of these 16 co-morbid health outcomes, such as depression, 17 anxiety, utilization of mental health services, 18 and things like suicidality. 19 Q What was the methodology of the study? 20 A It's a retrospective cohort study. 21 Q And what level of quality is that type of study? 22 MR. SELDIN: Object to form. 23 A So I think it depends on what you're using -- how 24 you're using the term "quality." I feel like 25 this is a high-quality study. If you're</p>	<p style="text-align: right;">Page 164</p> <p>1 BY MR. FISHER: 2 Q Under -- yeah, under "Results" it says -- oh, now 3 it got smaller. 4 MR. FISHER: There you go. Right there. 5 Yep. On that front right there. 6 BY MR. FISHER: 7 Q It says, "Compared with cisgender matched 8 controls, transgender youth had a twofold to 9 threefold increased risk of depression, anxiety 10 disorder, suicidal ideation," et cetera. 11 And so I'm wondering, is this -- does that 12 mean that this is a retrospective study that 13 compares only gender dysphoria -- people with 14 gender dysphoria, comparing them with people 15 without gender dysphoria? 16 MR. SELDIN: Object to form. 17 A This is comparing people with gender -- this is 18 comparing people specifically -- all right. Let 19 me make sure I'm answering your question 20 correctly. 21 So it's comparing transgender patients -- 22 Q Yeah. 23 A -- with cisgender matched controls. 24 Q Okay. So no comparison of treated or untreated 25 gender dysphoria in this paper?</p>

<p style="text-align: right;">Page 165</p> <p>1 A That's right. So if we go back to paragraph 2 35 -- right -- the -- I think that's something 3 that I'll point out here, is that the statement 4 here, "Gender dysphoria is highly treatable and 5 can be effectively managed. If left untreated, 6 however, it can result in severe anxiety and 7 depression, eating disorders, substance abuse, 8 self-harm, and suicidality," you know, that -- 9 those two sentences, my hope is -- is that those 10 two statements are supported by sort of the bulk 11 of paragraph -- or section C of the report, that 12 this Reisner article, I think, is included here 13 in the citation to establish the higher rates of 14 some of these co-morbid mental health disorders 15 but the fact that you're correct, in that this 16 study specifically is not assessing a treatment, 17 you know -- a treatment of gender dysphoria. 18 It's establishing the -- the fact of the 19 disparity in mental health in transgender people 20 in the first place. 21 Q Okay. Let's go on to Exhibit 14 and paragraph 36 22 of your statement -- of your declaration. 23 (Shumer Exhibit 14 marked.) 24 Q Paragraph 36, "Based on longitudinal data and my 25 own clinical experience" -- I think we've looked</p>	<p style="text-align: right;">Page 167</p> <p>1 that you pulled up was the one that I was 2 intending to be -- is intended to cite here. 3 Q Oh. 4 A Can you go back to the blue one. 5 Q Okay. But let's just make -- I want to make sure 6 I understand. Are you telling me that the 7 de Vries 2014 study does not support your 8 statement in paragraph 36? 9 MR. SELDIN: Object to form. 10 A You know what? I have to go back -- I'm trying 11 to figure out which citation I'm supposed to -- 12 is supposed to be here in 36. 13 But what is intended is there's a study sort 14 of outlining the -- sort of the -- obviously, 15 this author has several publications. Right? 16 And so the longitudinal study that I'm discussing 17 in 36 -- paragraph 36 has to do with sort of the 18 follow-up of patients as, I think -- I want to 19 say it's maybe between 40 and 60 of the first 20 patients seen in the Amsterdam Clinic that were 21 followed from before pubertal suppression through 22 hormone care, then surgery, and then into young 23 adulthood. That was -- that paper is the paper 24 intended to be cited regarding -- 25 Q Okay.</p>
<p style="text-align: right;">Page 166</p> <p>1 at this a little bit before, but for this 2 statement, "when transgender adolescents are 3 provided with appropriate medical treatment and 4 have parental and social support, they are more 5 likely to thrive and grow into healthy adults," 6 citing de Vries. So that goes to Exhibit 14, 7 which should be that de Vries study from 2014. 8 It's called -- it says original identity of 9 research -- no, not that one. It says "Original 10 research - Intersex and Gender Identity 11 Disorders" at the top. There's several de Vries. 12 There we go. Okay. So this is the de Vries 13 study you're citing in paragraph 36? 14 A I think so. It's a little small. If we can zoom 15 in a little bit. 16 MR. FISHER: You need to scroll up to the 17 top to see the cite. There we go. 18 A Okay. I believe this is the right one. 19 BY MR. FISHER: 20 Q Okay. So what is this study purporting to tell 21 us? 22 A Can you scroll down. 23 Thank you. 24 Yeah. So I think that this is not -- so 25 there's a study that is -- I think the first one</p>	<p style="text-align: right;">Page 168</p> <p>1 A -- the statement in 36. 2 Q So is that -- and I think the one that's up on 3 the screen now is what I have marked as 15. Is 4 that -- so is that the one? 5 (Shumer Exhibit 15 marked.) 6 A You know, I think so, but it's really hard for me 7 to just have these flashes of papers and know 8 exactly if it's the right one. 9 MR. SELDIN: Yeah. Tom, I just want to make 10 sure we get it right because I think you said one 11 was 2010 and it might have been the 2014 or vice 12 versa. So I admit I'm a little lost about -- 13 MR. FISHER: Well, we're looking at 14 paragraph 36, and there he cites de Vries et al. 15 2014. That's what I was going by, and then in 16 his bibliography that's the one that popped up, 17 so -- 18 A Yeah. We can't read this one to see what it's 19 saying in the abstract. 20 MR. FISHER: Harper, do you have the full 21 study? 22 MR. SELDIN: Hold on. I'm trying to look at 23 the one he's got up. 24 A Okay. So thank you. I can see this better now. 25 Yeah. Yeah. So this is -- this is the</p>

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1 de Vries study that is the intended citation for

2 36.

3 BY MR. FISHER:

4 **Q Okay.**

5 A Yep.

6 MR. SELDIN: And this one is for 2014?

7 THE WITNESS: Yes.

8 A So the citation is correct in 36, but this is now

9 the correct article.

10 **Q This is now the correct study. Okay. All right.**

11 MR. SELDIN: I think what Dr. Shumer is

12 trying to politely say is he was right and you

13 were wrong.

14 MR. FISHER: I know. You just had to put a

15 fine point on it, didn't you?

16 MR. SELDIN: Well, Dr. Shumer's trying to be

17 polite.

18 BY MR. FISHER:

19 **Q Okay. So here we've got the -- so describe to me**

20 **again. Let's just start over.**

21 **What is this study telling us?**

22 A This is just a description of the longitudinal --

23 this is the description of patients seen in this

24 particular clinic in Amsterdam. And, I think,

25 this is sort of a unique study because it's

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1 stretching out a very long period of time from --

2 looking at patients from -- that had received

3 pubertal suppression hormones, surgery, and now

4 are adults and just, you know, concluding that --

5 that their well-being was similar to or better

6 than same-aged young adults from the general

7 population.

8 **Q So this is a -- I think as I understand it, a**

9 **follow-up study, if I've got this right, that**

10 **began in 2011?**

11 A Well, you know, I think that that's possible. I

12 think that the patients that were described in

13 this study began being patients way before that

14 and maybe have been described in other -- other

15 articles as well. But I think that this

16 particular article is sort of the longest term

17 longitudinal study published by this particular

18 group.

19 **Q But the cohort -- in any event, the cohort size**

20 **here is only 55, right?**

21 MR. SELDIN: Object to form.

22 **Q 55 young individual adults?**

23 A This is a -- this is a report of 55 individuals.

24 That's correct.

25 **Q Is there a control group to compare?**

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1 MR. SELDIN: Object to form.

2 A So there's not a formal control group. Right?

3 This is, you know -- this is basically looking at

4 the outcomes of this cohort over time. You could

5 think, well, what would the control group be?

6 Right? You would say the implied control group

7 is untreated transgender individuals.

8 And so, you know, I think that the reason

9 that this paper is so, you know, interesting to

10 me is that just living in the world today, we

11 know that transgender individuals oftentimes do

12 really struggle, really struggle with respect to

13 not fitting in, in the world, feeling persecuted

14 or discriminated against, feeling depressed,

15 feeling anxious, having significant gender

16 dysphoria, that against -- it's against that sort

17 of bleakish backdrop that we're hearing that the

18 well-being of these people was similar to or

19 better than same-aged young adults from the

20 general population.

21 So, you know, the implied control group is

22 the general population. So, I mean -- sorry.

23 They're comparing this group against the general

24 population and to say that their well-being is

25 similar to or better than the general population,

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1 compared to that sort of implied control group of

2 we know that transgender people generally would

3 not be described as a population of having

4 well-being similar to or better than the general

5 population, that that's what makes this paper

6 interesting.

7 **Q Well, to be clear, this paper itself doesn't make**

8 **that -- that claim, that comparison? It only**

9 **compares to the general population? It doesn't**

10 **compare to a group of untreated transgender**

11 **adults?**

12 MR. SELDIN: Object to form.

13 A Well, I'd have to go back and read the paper, but

14 I would imagine that in the introduction, the

15 authors must describe in some detail that

16 people -- that transgender individuals

17 historically have not had well-being similar to

18 or better than the general population.

19 So -- so that was sort of the -- that the

20 results found that these individuals do, you

21 know, is why this paper is relevant.

22 **Q Let's take a look at page 702 of this report.**

23 **Just at the bottom left, it says 702.**

24 MR. FISHER: There it is, good.

25 **Q So that text right above the table -- so it says**

<p style="text-align: right;">Page 173</p> <p>1 here, these individuals, the -- which I</p> <p>2 understand that to be describing the cohort</p> <p>3 included in the study -- "These individuals of</p> <p>4 whom an even higher percentage than the general</p> <p>5 population were pursuing higher education seemed</p> <p>6 different from the transgender youth in community</p> <p>7 samples with high rates of mental health</p> <p>8 disorders, suicidality, and self-harming behavior</p> <p>9 and poor access to health services."</p> <p>10 Does that give you any concern about how</p> <p>11 representative this study is of the general --</p> <p>12 when it talks about, you know, comparing this</p> <p>13 cohort to the general population?</p> <p>14 MR. SELDIN: Object to form.</p> <p>15 A So I want to back up for a second and say that</p> <p>16 they're not saying that in choosing these</p> <p>17 patients to participate in the study initially</p> <p>18 they were pursuing higher education at higher</p> <p>19 rates. Of course, they were young adolescents.</p> <p>20 Right?</p> <p>21 So what they're saying is the patients that</p> <p>22 participated, that they're describing in this</p> <p>23 study, are going on to have -- what I think</p> <p>24 they're implying -- is successful lives and</p> <p>25 saying that this seems different than the youth</p>	<p style="text-align: right;">Page 175</p> <p>1 original cohort that participated in this study</p> <p>2 compared with nonparticipants."</p> <p>3 Does that give you any concern about the</p> <p>4 results -- the reliability of the results here?</p> <p>5 MR. SELDIN: Object to form.</p> <p>6 A Yeah. You know, this is just an aspect of</p> <p>7 research. It gets messy because we -- you know,</p> <p>8 because we can't do a randomized control trial,</p> <p>9 then we need to be creative about how we can</p> <p>10 attack these specific issues.</p> <p>11 So if we are saying, okay, how do patients</p> <p>12 do over the long term with this type of care, how</p> <p>13 are we going to conduct that study? Okay. We</p> <p>14 need to conduct that study at a place where</p> <p>15 people go to receive this care. Right? So you</p> <p>16 couldn't do this study without doing it in a</p> <p>17 medical center that is doing the care.</p> <p>18 So inherent in that is the idea that, well,</p> <p>19 not everyone's getting care. Right? If</p> <p>20 you're -- if you're farther away from Amsterdam,</p> <p>21 maybe you're less likely to get the care. If you</p> <p>22 don't have a car or maybe, you know, have -- have</p> <p>23 parents that won't bring you to the clinic, maybe</p> <p>24 you won't get the care.</p> <p>25 So those -- you know, so then the next</p>
<p style="text-align: right;">Page 174</p> <p>1 in community samples with higher rates of these</p> <p>2 other problems.</p> <p>3 This is something that I get to witness</p> <p>4 every day too, where, you know, oftentimes</p> <p>5 patients are coming to see me with, you know,</p> <p>6 parents feeling sort of hopeless, that there's</p> <p>7 no -- there's no future in sight and, you know,</p> <p>8 as I'm -- as we talked about graduating these</p> <p>9 kids to adult care, I do have that privilege of</p> <p>10 watching them, you know, successfully adulting in</p> <p>11 ways that we didn't -- that maybe their parents</p> <p>12 couldn't envision a few years before.</p> <p>13 So I think that's what these authors are</p> <p>14 describing, that sort of phenomenon of, wow, our</p> <p>15 patients are doing well, they're going to</p> <p>16 college, they're getting jobs. Kind of in</p> <p>17 contrast to sort of what we're seeing from --</p> <p>18 because I think that sentence is sort of read out</p> <p>19 of context there.</p> <p>20 Q Oh. Well, let's look at page 703. Right above</p> <p>21 "References."</p> <p>22 A Okay.</p> <p>23 Q "Third, despite absence of pretreatment</p> <p>24 differences on measured indicators, a selection</p> <p>25 bias could exist between adolescents of the</p>	<p style="text-align: right;">Page 176</p> <p>1 question is, okay, so if we did this same</p> <p>2 treatment to kids that weren't able to get the</p> <p>3 care for one reason or another, would we have the</p> <p>4 same results? And so that in the -- in the</p> <p>5 limitation section here, that's what the author</p> <p>6 is asking the reader to think about. Right?</p> <p>7 Would we have the same results if we did this</p> <p>8 study on all the people that didn't have a car</p> <p>9 back in 1990 to get to these clinics or didn't</p> <p>10 know -- their doctor didn't know about the clinic</p> <p>11 existing?</p> <p>12 And I think that that's left for the sort of</p> <p>13 contemplation of the reader -- or the common</p> <p>14 sense or the clinical sense of the reader to say,</p> <p>15 again, how generalizable is this to me, to my</p> <p>16 practice?</p> <p>17 So to me, you know, these patients are not</p> <p>18 exactly the same as the patients that I'm seeing</p> <p>19 in the office. They live in Michigan, not</p> <p>20 Amsterdam. It's 2023, not 1990s. So those are</p> <p>21 differences.</p> <p>22 Are those differences relevant? Maybe.</p> <p>23 Does this paper still help to inform me that</p> <p>24 gender-affirming care might be helpful? I think</p> <p>25 it does.</p>

<p style="text-align: right;">Page 177</p> <p>1 I think that this is -- you know, this is</p> <p>2 just the nature of research. The limitation is</p> <p>3 that the study wasn't done on your patient.</p> <p>4 Right? And you have to extrapolate from what's</p> <p>5 learned from others on to your own patient.</p> <p>6 Q Is it your understanding that all of the</p> <p>7 participants in this study were getting</p> <p>8 psychiatric support?</p> <p>9 MR. SELDIN: Object to form.</p> <p>10 A Yes.</p> <p>11 Q Does the study purport to control for psychiatric</p> <p>12 support in any way?</p> <p>13 MR. SELDIN: Object to form.</p> <p>14 A So the study's describing this particular clinic</p> <p>15 experience with their care, which they, I think,</p> <p>16 do a very nice job of describing what that care</p> <p>17 is. It involves psychological support,</p> <p>18 gender-affirming care.</p> <p>19 And so, you know, again I would go back to</p> <p>20 the same thing I just said. If I'm working in a</p> <p>21 place where there is not available psychiatric</p> <p>22 support or psychological support for patients,</p> <p>23 then I might say, hmmm, how am I going to use</p> <p>24 this study? Is it generalizable to me?</p> <p>25 It looks like these patients, they improved</p>	<p style="text-align: right;">Page 179</p> <p>1 know, you don't give people medication and say,</p> <p>2 "Well, hope things go all right. Let's never</p> <p>3 talk about this again"; that you're also</p> <p>4 advocating for the patient to be well-supported,</p> <p>5 supported in their family, supported in their</p> <p>6 school, to connect with mental health</p> <p>7 professionals, to help them -- help their</p> <p>8 journey.</p> <p>9 So how I would, I guess, answer your</p> <p>10 question is it seems like, you know, we have some</p> <p>11 pretty compelling data to say that this model of</p> <p>12 care works. So how -- how can I best replicate</p> <p>13 that using the resources that I have?</p> <p>14 Q And is it proper to infer causation from the</p> <p>15 medical interventions on this -- based on this</p> <p>16 paper?</p> <p>17 MR. SELDIN: Object to form.</p> <p>18 A Well, I think that there's some compelling</p> <p>19 reasons to -- and for some causation -- right --</p> <p>20 that there's -- you know, I think that the</p> <p>21 authors do a nice job of describing, you know,</p> <p>22 the intervention that they received, that</p> <p>23 there's -- you know, that there's an outcome that</p> <p>24 is quite different from what's expected based on</p> <p>25 the general population. So then if you're</p>
<p style="text-align: right;">Page 178</p> <p>1 with this package of psychological support,</p> <p>2 gender-affirming care, you know, seemingly</p> <p>3 supportive environment, and their outcomes were</p> <p>4 good.</p> <p>5 Unfortunately, you know, me as a</p> <p>6 hypothetical person, unfortunately in my</p> <p>7 situation, I have something that maybe is similar</p> <p>8 to their psychologig support. They have a</p> <p>9 therapist, but it's not exactly the same as, you</p> <p>10 know, what they're describing they did in terms</p> <p>11 of psychological support. So is this paper</p> <p>12 generalizable to me?</p> <p>13 And so, again, I think that goes back to --</p> <p>14 back to the clinical sense and common sense of</p> <p>15 the reader, that without providing that</p> <p>16 psychological support, would the treatment that</p> <p>17 I'm proposing -- or without providing</p> <p>18 psychological support exactly how it's outlined</p> <p>19 in Amsterdam, does my -- would my treatment</p> <p>20 result in similarly favorable outcomes?</p> <p>21 And so, you know, I think that, for the most</p> <p>22 part, providers of gender-affirming care today,</p> <p>23 the takeaway here is that, yeah, you don't give</p> <p>24 gender-affirming care, such as GnRH agonist or</p> <p>25 gender-affirming hormones, in a vacuum; that, you</p>	<p style="text-align: right;">Page 180</p> <p>1 thinking about, okay, what's the causation? All</p> <p>2 right? So it could be -- it could be this</p> <p>3 package of care. Right? That could be one of</p> <p>4 the causes.</p> <p>5 Now, in order to dispel that theory, I need</p> <p>6 to think about, well, what are other potential --</p> <p>7 potential causes for these people doing so well</p> <p>8 compared to the general trans population. Could</p> <p>9 it be that their situation is somehow very</p> <p>10 different from those in the general population?</p> <p>11 Is there some -- you know, is this -- do I buy</p> <p>12 that there's a significant, you know, selection</p> <p>13 bias?</p> <p>14 You know, I think that you can't -- you</p> <p>15 can't ever, you know, assume 100 percent</p> <p>16 causation in this type of study design, but I</p> <p>17 think the authors do a pretty nice job of, you</p> <p>18 know -- of explaining why causation should be</p> <p>19 considered.</p> <p>20 And, you know, when I read this study, the</p> <p>21 conclusion that I reach is that, gosh, it seems</p> <p>22 like these patients are doing quite well after</p> <p>23 this intervention. It's nice that they were also</p> <p>24 involved in this really seemingly well-run</p> <p>25 clinic. And so, you know, while I -- while I</p>

<p style="text-align: right;">Page 181</p> <p>1 endeavor to provide high-quality care, let me</p> <p>2 learn from their experience in applying that to</p> <p>3 my own patients.</p> <p>4 Q So did the authors use the -- what I think is</p> <p>5 sometimes referred to as the UGDS, the Utrecht</p> <p>6 Gender Dysphoria Scale?</p> <p>7 MR. SELDIN: Object to form.</p> <p>8 A I believe so.</p> <p>9 Q Are you aware whether they switched the version,</p> <p>10 male to female and female to male, after the</p> <p>11 transition interventions?</p> <p>12 MR. SELDIN: Object to form.</p> <p>13 A You know, I have heard sort of this question</p> <p>14 raised about this paper before, and I'm not</p> <p>15 exactly sure that -- I don't want to make a</p> <p>16 mistake in answering it. If there's a part in</p> <p>17 the paper that is relevant to pull up, maybe I</p> <p>18 can review it with you in more detail.</p> <p>19 Q Yeah. I'm really just asking about awareness.</p> <p>20 You've heard it. I've heard it. I don't know</p> <p>21 that there's anything in the paper that tells us</p> <p>22 exactly. I just wondered if you were aware of</p> <p>23 that or had any information about that.</p> <p>24 MR. SELDIN: Object to form.</p> <p>25 A Yeah. I'm not sure that I have -- that I'm the</p>	<p style="text-align: right;">Page 183</p> <p>1 quantify gender dysphoria? That's hard.</p> <p>2 So I think the Utrecht Gender Dysphoria</p> <p>3 Scale is an effort to try to quantify gender</p> <p>4 dysphoria. It's not perfect. I don't think that</p> <p>5 many people use it. But, you know, I think that</p> <p>6 people are picking out this question about which</p> <p>7 form was used to -- on which patient at which</p> <p>8 time.</p> <p>9 To me, I think that sort of misses the</p> <p>10 point, that, you know, the primary outcome of</p> <p>11 this is -- is, you know -- is well-being which,</p> <p>12 you know, they describe how they measure it in</p> <p>13 lots of different ways.</p> <p>14 So, yeah, I think that it's an interesting</p> <p>15 question. How -- what version of the Utrecht</p> <p>16 Gender Dysphoria Scale would you use before and</p> <p>17 after transition? You know, I don't really have</p> <p>18 the answer. But I guess that's to say I'm aware</p> <p>19 that this question exists, but I'm not sure that</p> <p>20 it's -- that it's something that makes me feel</p> <p>21 feelings one way or another in general about the</p> <p>22 study as a whole.</p> <p>23 Q Okay. So I think I want to go back to</p> <p>24 Exhibit 14, which might -- it's hard -- there it</p> <p>25 is. The date is in the lower right. There it</p>
<p style="text-align: right;">Page 182</p> <p>1 most eloquent in sort of feeding back your -- you</p> <p>2 know, opponents' talking points about this</p> <p>3 particular problem. But I think it has something</p> <p>4 to do with, you know, after transition, that, you</p> <p>5 know -- so, first of all, what is the Utrecht</p> <p>6 Gender Dysphoria Scale? It's a pretty simple</p> <p>7 tool that is, you know, basically asking</p> <p>8 questions like this is how I feel about my chest,</p> <p>9 about my face, about my body.</p> <p>10 And my understanding is that there's sort of</p> <p>11 a version that is designed to be asked to people</p> <p>12 assigned male at birth, people assigned female at</p> <p>13 birth. And so I think that the -- you know, I</p> <p>14 think in the beginning -- right? -- the Utrecht</p> <p>15 was presumably asked of people using the -- the</p> <p>16 version that's according to their assigned sex.</p> <p>17 And then subsequently, after transition, the</p> <p>18 question is, well, which version of this do we</p> <p>19 use? Right? You know, I think -- I think</p> <p>20 inherent in that is, like, well, what's the</p> <p>21 difference? What are we talking about here?</p> <p>22 And I think that the point here is that</p> <p>23 there's an effort to try to quantify something</p> <p>24 that's hard to quantify, which is sort of what</p> <p>25 you've been asking me about, right? How do we</p>	<p style="text-align: right;">Page 184</p> <p>1 is. So this says 2010.</p> <p>2 I guess I'm -- my understanding is that this</p> <p>3 is the original de Vries, and then what's at</p> <p>4 Exhibit 15 is the follow-up study.</p> <p>5 Do you have enough familiarity with this to</p> <p>6 tell me if you think that's true?</p> <p>7 MR. SELDIN: Object to form.</p> <p>8 A So this is the 2010, right?</p> <p>9 Q Yeah.</p> <p>10 A Yeah. So what was your question?</p> <p>11 Q I'm wondering if this is -- if I'm right in</p> <p>12 saying that this is the study that -- you know,</p> <p>13 the de Vries -- first de Vries study published</p> <p>14 with this cohort, and then the 2014 that we just</p> <p>15 looked at is a follow-up of this same group with</p> <p>16 fewer participants.</p> <p>17 A Yeah. You know what? I'm not -- I'm not sure.</p> <p>18 Q Okay. But are you familiar with this paper</p> <p>19 generally?</p> <p>20 A Yes.</p> <p>21 Q And, again, what is this paper telling us?</p> <p>22 A So this is more of trying to assess shorter term</p> <p>23 measurables at different time points. And I</p> <p>24 think -- if you just give me a second, I can take</p> <p>25 a quicker look here.</p>

<p style="text-align: right;">Page 185</p> <p>1 Q Sure.</p> <p>2 A Can you zoom in just a smidgen.</p> <p>3 Okay. Got it. I can answer your questions</p> <p>4 now.</p> <p>5 Q Okay.</p> <p>6 A So what was your question?</p> <p>7 Q Yeah. I haven't -- there isn't one on the table.</p> <p>8 I'm sort of looking at it to see what I want to</p> <p>9 ask you about it.</p> <p>10 Okay. So we have 70 participants in this</p> <p>11 study; is that accurate?</p> <p>12 A Yes.</p> <p>13 Q And what ages were they?</p> <p>14 A Well, they were -- in the introduction, in this</p> <p>15 abstract they say, you know -- this is a paper</p> <p>16 about GnRH agonists specifically. Right? So</p> <p>17 we're talking about early adolescence. You know,</p> <p>18 they're saying 12 to 16 is the common age that</p> <p>19 they're using GnRH agonists. Now I don't know if</p> <p>20 all the patients in this study are between 12 and</p> <p>21 16, but basically they're patients that are being</p> <p>22 treated with GnRH agonist in early adolescence --</p> <p>23 early adolescence. Excuse me.</p> <p>24 Q Go ahead.</p> <p>25 A Oh, that's it.</p>	<p style="text-align: right;">Page 187</p> <p>1 of -- what we're trying to do is trying to</p> <p>2 isolate the effect of the intervention GnRH</p> <p>3 agonists.</p> <p>4 So in this study some of those things that</p> <p>5 they measured seemed to improve, and others were</p> <p>6 not changed from the time before starting</p> <p>7 treatment and right before starting hormones.</p> <p>8 So, for example, the behavior and emotional</p> <p>9 problems, depressive symptoms decreased.</p> <p>10 However, body satisfaction did not change.</p> <p>11 Right? So, you know, I think -- I think that's</p> <p>12 kind of an interesting study, you know. We're</p> <p>13 trying to say, okay, what does -- what does --</p> <p>14 what does GnRH agonist potentially do in the</p> <p>15 treatment of gender dysphoria as part of that</p> <p>16 bigger picture that we -- you know, if we -- if</p> <p>17 we agree with the findings of the previous study,</p> <p>18 what is it about GnRH agonist that seems to be</p> <p>19 helpful as part of that care package?</p> <p>20 And, you know, I think if I was just to</p> <p>21 think about it logically, you know, if someone is</p> <p>22 starting puberty and they're seeing their body</p> <p>23 start changing in a really -- in a way that's</p> <p>24 making them feel very distressed and nervous, in</p> <p>25 a way that is not looking with their gender</p>
<p style="text-align: right;">Page 186</p> <p>1 Q Okay. And what was the result of the study?</p> <p>2 A Well, they're trying to isolate the effect of</p> <p>3 this one intervention itself, GnRH agonists.</p> <p>4 Right? And so, you know, in the last -- in the</p> <p>5 last paper that we were discussing, that's really</p> <p>6 sort of like, okay, we have transgender young</p> <p>7 people at this end, and then we follow them all</p> <p>8 the way to this end, you know, 20-odd years</p> <p>9 later.</p> <p>10 This is a much shorter study. So, you know,</p> <p>11 I think as I was describing that study, I was</p> <p>12 like, okay, well, there's a lot -- and as you</p> <p>13 pointed out too -- there's a lot going on there.</p> <p>14 Like, these people went through a lot of</p> <p>15 different interventions, and, you know, how do we</p> <p>16 know what's causing what?</p> <p>17 I think this is sort of, like, trying to get</p> <p>18 to some of the heart of that because, again, we</p> <p>19 need to approach these challenging topics from a</p> <p>20 variety of different angles.</p> <p>21 So this is saying, okay, from before you</p> <p>22 start GnRH agonists to right before you start</p> <p>23 hormone treatment, let's see how people score on</p> <p>24 a variety of different scales. And in so doing,</p> <p>25 what we're hoping for is to isolate the effect</p>	<p style="text-align: right;">Page 188</p> <p>1 identity, that might make someone really</p> <p>2 depressed, really anxious, have decrease in</p> <p>3 general functioning.</p> <p>4 And so if you were to say, okay, I get that</p> <p>5 you're really, you know, doing poorly with the</p> <p>6 onset of puberty, let's stop puberty, you might</p> <p>7 say, okay, I might expect that person's distress</p> <p>8 around the continuation of puberty to get better</p> <p>9 and their general functioning to get better.</p> <p>10 But they still have a body, a gender</p> <p>11 identity that doesn't match their assigned sex at</p> <p>12 birth. So that body satisfaction didn't change,</p> <p>13 but some of the distress around going through</p> <p>14 puberty gets better. Right? So it's</p> <p>15 interesting.</p> <p>16 You know, I think that that sort of helps me</p> <p>17 to understand, you know, how someone that has</p> <p>18 gender dysphoria to the degree that they go on to</p> <p>19 GnRH agonist and then subsequently start</p> <p>20 hormones -- how I might counsel that patient, you</p> <p>21 know, in sort of setting expectations that, you</p> <p>22 know, I -- that we're, you know -- if I'm seeing</p> <p>23 someone -- if I'm thinking about this study</p> <p>24 specifically and approaching a patient that is,</p> <p>25 say, 12, at Tanner Stage 2, considering</p>

<p style="text-align: right;">Page 189</p> <p>1 gender-affirming care with GnRH agonists, and I'm</p> <p>2 hearing from the patient and the parents that the</p> <p>3 patient is really distressed and depressed and</p> <p>4 not going to school and they are really -- they</p> <p>5 really hate their penis and they have thoughts</p> <p>6 of, like, cutting off their penis and -- and that</p> <p>7 we're talking about the risks and benefits of</p> <p>8 GnRH agonist, I might suggest, based on this</p> <p>9 paper, that, you know, the GnRH agonist will stop</p> <p>10 that process of continued mas- -- the continued</p> <p>11 masculinization, that if there's some degree of</p> <p>12 depression or anxiety that you're feeling because</p> <p>13 your body is starting to masculinize, my hope is</p> <p>14 that -- and my expectation based on the</p> <p>15 literature is that that may improve. But your</p> <p>16 feelings about your body parts that you hate,</p> <p>17 that you want to cut off, that may not improve</p> <p>18 with GnRH agonists.</p> <p>19 Q So do you have an understanding about how the</p> <p>20 demographics of the youth that were studied in</p> <p>21 this study compared to the demographics of the</p> <p>22 youth that identify as gender dysphoric today?</p> <p>23 MR. SELDIN: Object to form.</p> <p>24 A Well, I think there's a lot of differences</p> <p>25 between then and now. And so I would say that I</p>	<p style="text-align: right;">Page 191</p> <p>1 gender-affirming care than when the study was</p> <p>2 published.</p> <p>3 Q What percent of your patient population of those</p> <p>4 with gender dysphoria are natal females versus</p> <p>5 natal males?</p> <p>6 MR. SELDIN: Object to form.</p> <p>7 A I don't have an exact breakdown for you, but I</p> <p>8 would say 65 percent.</p> <p>9 Q Okay.</p> <p>10 MR. FISHER: So I think it might be a good</p> <p>11 time for a break. Just five minutes, everybody.</p> <p>12 Is that all right?</p> <p>13 MR. SELDIN: Sounds good.</p> <p>14 (Recess taken from 2:51 p.m. to 2:54 p.m.)</p> <p>15 BY MR. FISHER:</p> <p>16 Q Doctor, let's turn to paragraph 72 of your</p> <p>17 declaration.</p> <p>18 MR. FISHER: So, Shawn, if you could make</p> <p>19 that just a little bit bigger, please.</p> <p>20 Thank you.</p> <p>21 BY MR. FISHER:</p> <p>22 Q So here you say, "Review of relevant medical</p> <p>23 literature clearly supports the benefits of GnRHa</p> <p>24 treatment on both short-term and long-term</p> <p>25 psychological functioning and quality of life."</p>
<p style="text-align: right;">Page 190</p> <p>1 have some familiarity with that subject, yes.</p> <p>2 Q And what's your understanding of how the</p> <p>3 demographics compare?</p> <p>4 A I think there's more people today that are</p> <p>5 seeking care for gender-related concerns than</p> <p>6 there were when this paper was written in an era</p> <p>7 where there were no services for gender-related</p> <p>8 care.</p> <p>9 Q What's the demographic makeup look like? I mean,</p> <p>10 there are more people, but is the demographic</p> <p>11 makeup roughly the same, or is it different?</p> <p>12 MR. SELDIN: Object to form.</p> <p>13 A Well, I think that there's a couple differences</p> <p>14 from the description of these patients to the</p> <p>15 patients that I see in clinic that I can review</p> <p>16 with you. You know, I would say that in -- in</p> <p>17 our clinic today we're seeing, you know, maybe a</p> <p>18 third of patients presenting in earlier puberty,</p> <p>19 about two-thirds presenting in later puberty, and</p> <p>20 we're seeing a higher percentage of people</p> <p>21 assigned -- assigned male at birth -- assigned</p> <p>22 female at birth compared to assigned male at</p> <p>23 birth, and that the -- you know, the general</p> <p>24 numbers of people presenting to care is higher --</p> <p>25 there's a higher prevalence of presenting to</p>	<p style="text-align: right;">Page 192</p> <p>1 And so -- and then you cite several studies.</p> <p>2 So I want to go through those studies now.</p> <p>3 And let's start with the Turban study that you</p> <p>4 site there, Turban et al., 2020b, and this is</p> <p>5 going to be Exhibit 16.</p> <p>6 (Shumer Exhibit 16 marked.)</p> <p>7 Q Doctor, do you recognize this study?</p> <p>8 A Yes.</p> <p>9 Q Okay. Is this the study that's cited -- the</p> <p>10 Turban study cited in paragraph 72?</p> <p>11 A Yes.</p> <p>12 Q Can you just summarize what this study purports</p> <p>13 to show us.</p> <p>14 MR. SELDIN: Object to form.</p> <p>15 A Yep. So this is, you know, again, trying to</p> <p>16 attack that question, what is -- what are each of</p> <p>17 these -- how do each of these aspects of care</p> <p>18 impact health outcomes. And this one is</p> <p>19 specifically trying to address that question from</p> <p>20 the standpoint of the pubertal suppression.</p> <p>21 And so, you know, in this particular</p> <p>22 situation we're looking at, I believe, again,</p> <p>23 results from the 2015 U.S. Transgender Health</p> <p>24 Survey and asking the question to adults, you</p> <p>25 know, did you or did you not receive pubertal</p>

<p style="text-align: right;">Page 193</p> <p>1 suppression? And then finding out if there's</p> <p>2 differences between people that answered yes or</p> <p>3 no to that question.</p> <p>4 Q And what -- what did it find? What are the</p> <p>5 findings?</p> <p>6 A So there was lower odds of lifetime suicidal</p> <p>7 ideation for people that were -- that received</p> <p>8 pubertal suppression.</p> <p>9 Q We talked about this -- I think this report or at</p> <p>10 least this survey a little bit earlier in your</p> <p>11 testimony. Do you remember that?</p> <p>12 A I do.</p> <p>13 Q Okay. Do you in your practice -- I think you</p> <p>14 mentioned -- and I just want to make sure I</p> <p>15 understand -- that do you find that this survey</p> <p>16 and then the studies that depend on the survey</p> <p>17 results are generalizable?</p> <p>18 MR. SELDIN: Object to form.</p> <p>19 A Yeah. So I think, again, generalizability of any</p> <p>20 study, you have to put it in context. How does</p> <p>21 this relate to the patient that I'm treating</p> <p>22 today?</p> <p>23 So I think in this particular study, you</p> <p>24 know, what the author is trying to do is, you</p> <p>25 know, again answer a very challenging question.</p>	<p style="text-align: right;">Page 195</p> <p>1 about my patient to answer that question. You</p> <p>2 know, is my -- does my patient have gender</p> <p>3 dysphoria? How is that gender dysphoria</p> <p>4 manifesting? But, you know, if I feel like that</p> <p>5 patient is, you know, otherwise a candidate for</p> <p>6 gender-affirming care with GnRH agonists, I think</p> <p>7 this survey is helpful because it provides, while</p> <p>8 not perfect, some interesting information about</p> <p>9 the lifetime suicidal risk of patients that were</p> <p>10 and were not prescribed this medication.</p> <p>11 Q Have you gone back to review the survey results</p> <p>12 themselves, or have you only read the papers that</p> <p>13 are based on the survey results?</p> <p>14 MR. SELDIN: Object to form.</p> <p>15 A Yes. So the -- we've been talking about the</p> <p>16 survey a lot so I'm not sure if I'm getting the</p> <p>17 name exactly right -- I intend to -- but the U.S.</p> <p>18 transgender health survey that we've been talking</p> <p>19 about --</p> <p>20 Q Right.</p> <p>21 A -- is -- yes, I have read that report.</p> <p>22 Q So you're familiar with that part of that report</p> <p>23 there where it says "Although the intention was</p> <p>24 to recruit a sample that was as representative as</p> <p>25 possible of transgender people in the U.S., it is</p>
<p style="text-align: right;">Page 194</p> <p>1 How does GnRH agonist affect lifetime suicidal</p> <p>2 ideation? Of course, not something that you can</p> <p>3 measure very easily with, for example, a</p> <p>4 randomized controlled trial. Like, these people</p> <p>5 get it; these people don't. Let's see in 50</p> <p>6 years how many people committed suicide -- or</p> <p>7 contemplated suicide. Impossible study to do.</p> <p>8 So to attack that question -- you know, I</p> <p>9 think that the kind of unique thing about this</p> <p>10 study and studies based off that survey is just</p> <p>11 the sheer number of people that, you know, while</p> <p>12 you can say that not being a prospective</p> <p>13 randomized controlled study is a limitation, one</p> <p>14 of the -- one of the reasons that the study -- in</p> <p>15 favor of its generalizability is the sheer number</p> <p>16 of patients -- or number of people that were</p> <p>17 included in the study. This is why</p> <p>18 cross-sectional survey data can sometimes be very</p> <p>19 powerful.</p> <p>20 So, you know, in terms of generalizability,</p> <p>21 again, how I interpret that word is if I'm seeing</p> <p>22 a patient and we're thinking about GnRH agonist,</p> <p>23 does this study help to inform me about whether</p> <p>24 this patient would benefit from it.</p> <p>25 So I'm thinking that I need to know a lot</p>	<p style="text-align: right;">Page 196</p> <p>1 important to note that respondents in this study</p> <p>2 were not randomly sampled, and the actual</p> <p>3 population characteristics of transgender people</p> <p>4 in the U.S. are not known. Therefore, it is not</p> <p>5 appropriate to generalize the findings in this</p> <p>6 study to all transgender people." Are you</p> <p>7 familiar with that statement?</p> <p>8 MR. SELDIN: Object to form.</p> <p>9 A Yeah, I think you were just reading directly from</p> <p>10 the U.S. Transgender Health Survey; is that</p> <p>11 right?</p> <p>12 Q That's right.</p> <p>13 A Yes, so I am familiar with that statement.</p> <p>14 Q Okay. And then I think earlier you also</p> <p>15 mentioned that this survey was affiliated or was</p> <p>16 somehow reported on by the Williams Institute.</p> <p>17 Does that ring a bell?</p> <p>18 A Yes.</p> <p>19 Q Do you remember that?</p> <p>20 A Yes.</p> <p>21 Q Okay. And so the Williams Institute has a</p> <p>22 statement about suicide thoughts and attempts</p> <p>23 among transgender adults from the 2015 U.S.</p> <p>24 Transgender Survey. Are you familiar with that</p> <p>25 report?</p>

<p style="text-align: right;">Page 197</p> <p>1 MR. SELDIN: Object to form.</p> <p>2 A I'm not sure I know what you're talking about.</p> <p>3 Q So the transgender survey that was published by</p> <p>4 the National Coalition for Transgender Equality;</p> <p>5 is that right?</p> <p>6 A I believe so.</p> <p>7 Q Do you know anything about the National Coalition</p> <p>8 for Transgender Equality?</p> <p>9 A I'm not extremely familiar, but I understand that</p> <p>10 it's a group that, you know, is working to make</p> <p>11 healthcare better for transgender people.</p> <p>12 Q And do you understand that it is an advocacy</p> <p>13 organization?</p> <p>14 MR. SELDIN: Object to form.</p> <p>15 A I'm not sure exactly all the functions of this</p> <p>16 particular organization. I'm sure advocacy is</p> <p>17 part of its mission. Advocating for the health</p> <p>18 of transgender people seems to be -- seems to be</p> <p>19 the thrust of why a survey of transgender health</p> <p>20 would be needed in the first place. So that</p> <p>21 makes sense.</p> <p>22 Q Do you understand the authors of the U.S.</p> <p>23 transgender survey to have been trans advocates?</p> <p>24 MR. SELDIN: Object to form.</p> <p>25 A I don't know -- I'm not sure what a trans</p>	<p style="text-align: right;">Page 199</p> <p>1 MR. SELDIN: Object to form.</p> <p>2 A Yes. While I've heard some of these critiques, I</p> <p>3 don't think that they're -- they're extremely</p> <p>4 helpful or valid critiques. I think that when</p> <p>5 we're trying to find tens of thousands of</p> <p>6 transgender people across the country, that you</p> <p>7 need to go where the transgender people are.</p> <p>8 Right? So this type of recruitment is not unique</p> <p>9 to the U.S. transgender health survey, that large</p> <p>10 surveys of maybe hard-to-find demographics, you</p> <p>11 know, use these type of recruitment strategies</p> <p>12 all the time.</p> <p>13 That, you know, if you wanted to conduct,</p> <p>14 for example, a survey of American Sikh people,</p> <p>15 you might, you know, start by saying, okay, where</p> <p>16 would I find American Sikh people? Maybe in</p> <p>17 their temples. Let's post flyers in their</p> <p>18 temples. I want to find as many as I can from</p> <p>19 across the whole country. All right. Maybe the</p> <p>20 ones I find in the temples, maybe I tell them if</p> <p>21 they know any people that are Sikh, that there's</p> <p>22 a study, that we want to include everyone</p> <p>23 possible in your religion in this study. Maybe</p> <p>24 I'll post on online boards that people with that</p> <p>25 religion tend to frequent, with the goal of</p>
<p style="text-align: right;">Page 198</p> <p>1 advocate means, but I'm happy to review a</p> <p>2 definition.</p> <p>3 Q So in this Turban study that we've got up -- so</p> <p>4 are there risks of inherent biases in this study</p> <p>5 and its results?</p> <p>6 MR. SELDIN: Object to form.</p> <p>7 A Similarly to all studies, there's risk of</p> <p>8 inherent biases, so yes.</p> <p>9 Q Are you aware of reviews that criticize Turban's</p> <p>10 study -- this particular study?</p> <p>11 MR. SELDIN: Object to form.</p> <p>12 A I want to answer your question correctly. I have</p> <p>13 seen critiques about, I guess, studies based upon</p> <p>14 the U.S. transgender health survey in general,</p> <p>15 but I'm not sure if I've seen specific to this</p> <p>16 particular study.</p> <p>17 Q Are you familiar with the criticism that the</p> <p>18 transgender survey from 2015 suffers from</p> <p>19 convenience sampling?</p> <p>20 MR. SELDIN: Object to form.</p> <p>21 A I have heard some critique along those lines,</p> <p>22 yes.</p> <p>23 Q Are you familiar with the critique that</p> <p>24 participants were recruited by transgender</p> <p>25 advocacy organizations?</p>	<p style="text-align: right;">Page 200</p> <p>1 trying to get as robust and diverse a sample as</p> <p>2 possible.</p> <p>3 So that's how -- that's how oftentimes these</p> <p>4 large surveys are conducted. Then the question</p> <p>5 is, okay, well, who could we be missing? Right?</p> <p>6 Who could we be missing? And, you know, could we</p> <p>7 be missing people that are in rural America?</p> <p>8 Maybe. You know, are we capturing -- is there an</p> <p>9 ethnic group that we're not capturing because</p> <p>10 they're not in our catchment with our current</p> <p>11 recruitment strategy? So then our recruitment</p> <p>12 strategy can change and say, okay, we think that</p> <p>13 we're underrepresenting this area, so let's focus</p> <p>14 on that.</p> <p>15 So this is very different than, you know,</p> <p>16 random sampling of people. Right? This is --</p> <p>17 this is how this type of research is conducted.</p> <p>18 So it's perfectly fine to have criticisms of that</p> <p>19 kind of research, but it's certainly not unique</p> <p>20 to transgender questions. It's how, you know,</p> <p>21 large population data needs to be conducted when</p> <p>22 you're trying to include as many people as</p> <p>23 possible in a survey like this.</p> <p>24 Q How would this survey account for any</p> <p>25 representation by the population whose earlier</p>

<p style="text-align: right;">Page 201</p> <p>1 gender dysphoria was alleviated through cognitive 2 behavior therapy? Are those individuals 3 represented in this survey? 4 MR. SELDIN: Object to form. 5 A I would suggest they're probably not because the 6 people that are intended to fill out the survey 7 are adults that identify as transgender. So if 8 there's a hypothetical person who had gender 9 dysphoria and then that resolved due to this type 10 of cognitive therapy that you're describing and 11 they no longer identify as transgender, then that 12 person would be unlikely to identify as 13 transgender, which I think was the inclusion 14 criteria for this survey. 15 Q Are you aware whether this study controls for 16 psychiatric co-morbidities? 17 MR. SELDIN: Object to form. 18 A The survey or the study? 19 Q Well, either one. 20 A So there's -- the survey wouldn't control for 21 anything because it's a survey of all the people 22 that we can find across the country that are 23 transgender. So you don't control when you're 24 recruiting for a population-based study. 25 What you can do is you can use the responses</p>	<p style="text-align: right;">Page 203</p> <p>1 it was some independent psychological 2 co-morbidity. 3 A Gotcha. So, you know, I think not exactly. I 4 mean, the -- again, the author is using -- using 5 their experience with thinking about research 6 when trying to ascertain that. Right? 7 I think that what Turban is able to say is 8 that there is this -- in this large group of 9 people, you know, basically he can say the 10 following: That people were asked this one 11 question. Some people answered it one way. Some 12 people answered it another way. There was 13 another question in the survey. Some people 14 answered it one way. Some people answered it 15 another way. Let's compare. 16 And so, no, there's not -- this is not a 17 randomized control trial. You can't control for 18 all these variables. You've got to use your 19 brain and say, okay, are there other things that 20 could bias this? And maybe there are. 21 And so when I'm looking at this, I say, 22 well, I can't think of reasons that, you know, 23 one group should be different than the other, 24 people that -- that put "yes" for they've had 25 suicidal ideation versus another in their</p>
<p style="text-align: right;">Page 202</p> <p>1 to answer questions, and the responses can serve 2 as controls. Right? So if you're saying, you 3 know -- let's say we want to know if people that 4 live in Kansas in the survey are more or less 5 depressed than the people that live in Missouri. 6 Then you would control by state and then assess 7 for depression. 8 But going into the study, you don't control 9 for anything because it's a population-based 10 survey. 11 Q Okay. Well, does Turban control for 12 co-morbidities when he analyzes the data? 13 MR. SELDIN: Object to form. 14 A Well, the -- this particular paper is asking 15 about a lifetime -- lifetime risk for suicidal 16 ideation. Right? So I'm trying to understand 17 your question. 18 So for your question to make sense, I think 19 you're asking if patients -- if there was a 20 difference in depression in childhood, in people 21 that were and were not offered pubertal 22 suppression; is that right? 23 Q Yeah. I'm just trying to figure out, you know, 24 if we know what led to any particular outcome, 25 whether it was dysphoria and treatment or whether</p>	<p style="text-align: right;">Page 204</p> <p>1 access -- their ability -- in -- if there's a 2 difference between them in terms of accessing 3 pubertal suppression. I can't think of a reason 4 that there should be some other variable that's 5 the cause. 6 But, you know, we have improvement with this 7 paper. So I think with that in mind, then I say, 8 okay, how much do I value this paper as part of 9 the medical literature? I would say I do. I 10 think it's a large paper that has a pretty 11 significant result. 12 Q And I'm wondering about a couple of -- a couple 13 of aspects of those who are included in the 14 survey, one of which is was there -- does this 15 paper or the survey it's based on reflect any 16 effort to detect potential false subjects? 17 MR. SELDIN: Object to form. 18 A Can you define what a "false subject" is. 19 Q Well, somebody who's posing as an honest person 20 who has, you know, straightforward answers to 21 these questions versus somebody who's just, you 22 know, deciding to fill out a survey under, you 23 know -- you know, just to load up the data that 24 corresponds to a particular set of responses. 25 It's not an actual person. It's just a person</p>

<p style="text-align: right;">Page 205</p> <p>1 who's filling out, you know, response after 2 response after response and thereby loading up 3 the data. 4 MR. SELDIN: Object to form. 5 A I haven't really considered that as a concern. 6 As fun as surveys are, I don't think many people 7 would just fill it out for -- for fun. But I'm 8 not aware of whether there's any efforts. If 9 there are, you know, I don't remember. 10 Q And, of course, anyone who was treated with 11 pubertal suppression who went on to commit 12 suicide would not be accounted for in this study? 13 MR. SELDIN: Object to form. 14 A Yes, I would agree that people that have died by 15 suicide would not be included in this study 16 whether or not they were given GnRH agonist. 17 Q I'm wondering about the most seriously mental ill 18 people who would, you know, be diagnosed with 19 gender dysphoria. Would they be denied puberty 20 blockers given the seriousness of their mental 21 illness? 22 MR. SELDIN: Object to form. 23 A That hasn't necessarily been my experience. You 24 know, I think that if you -- if we're sort of 25 going back to the basics of, you know, what the,</p>	<p style="text-align: right;">Page 207</p> <p>1 that would not line up with my clinical 2 experience, no. 3 Q Let's take a look at Table 3 of the paper. It's 4 page 5. So as I understand it, now, you've got 5 these different outcomes and then, you know, 6 suicidality; suicidality, lifetime; mental health 7 and substance abuse, et cetera. And then you've 8 got two columns, the "yes" column meaning, yes, 9 you have been treated with pubertal suppression 10 and "no" meaning you have not. 11 Am I reading that right? 12 MR. SELDIN: Object to form. 13 A Yep. So there are -- there's rows and columns. 14 The rows are mental health outcomes, like 15 suicidality. And the columns are treatment 16 status -- historical treatment status with 17 gender -- with pubertal suppression. 18 Q If we look at "ideation with plan and attempt," 19 do you see the results there? 20 There's 11 in the "yes" column and 473 in 21 the "no" column. But the comparison baseline is 22 much different. So the percentages are 24.4 for 23 the "yes" and 21.5 for the "no." Do you see 24 that? 25 A I see that, yes.</p>
<p style="text-align: right;">Page 206</p> <p>1 for example, WPATH criteria would suggest with 2 respect to treatment, you know, it's suggesting 3 that other mental health conditions should be in 4 reasonable control. 5 And so then we say, well, what's reasonable 6 control? I think that by digging a little deeper 7 into what that means is that, you know, if you're 8 actively, floridly suicidal at the time, then 9 you're not going to be in a place to have a 10 conversation about risks and benefits and making 11 a serious life decision about an important aspect 12 of your healthcare. 13 That being said, you know, many patients who 14 have gender dysphoria, who have significant 15 depression or anxiety, are -- do proceed with 16 treatment because while they have co-morbid 17 mental health problems, those problems are not 18 interfering with their ability to -- to 19 understand risks and benefits and provide assent 20 or consent. 21 So I believe the answer is I don't -- I 22 don't think so, really. I think that if the 23 question is, you know, could the sickest patients 24 be more suicidal because they were so sick that 25 they never got blockers, that would not be --</p>	<p style="text-align: right;">Page 208</p> <p>1 Q Is that a statistically significant difference? 2 MR. SELDIN: Object to form. 3 A I don't know. 4 Q And then if you look down under "suicidality 5 (lifetime)," under attempts -- this says 37 is 6 the raw, but then it gives the percent of 41.6. 7 Is that telling us that over 40 percent of the 8 treated group attempted suicide? 9 MR. SELDIN: Object to form. 10 A Yes, that is correct. 11 Q All right. Let's move on to the Kuper paper, 12 Exhibit 17. 13 (Shumer Exhibit 17 marked.) 14 Q Doctor, are you familiar with this paper? 15 A Yes. 16 Q Is this the Kuper paper cited in paragraph 72 of 17 your declaration? 18 A Sorry. Can you repeat that. 19 Q Sorry. Is this the Kuper paper cited in 20 paragraph 72 of your declaration? 21 A Yes. 22 Q What is -- 23 MR. SELDIN: Mr. Fisher, can you scroll down 24 just for a date. Sorry. 25 MR. FISHER: Yeah. It's not me,</p>

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<p>1 unfortunately. It's Shawn.</p> <p>2 MR. SELDIN: It's Shawn. Long-suffering</p> <p>3 Shawn, can you scroll down, please.</p> <p>4 MR. FISHER: Right. Poor Shawn.</p> <p>5 A Yeah, that looks right.</p> <p>6 BY MR. FISHER:</p> <p>7 Q Good. Okay. So what is this -- what is this</p> <p>8 paper purporting to tell us?</p> <p>9 A All right. So we're getting into the</p> <p>10 nitty-gritty here so just give me a second here</p> <p>11 to refresh my memory so I can give you the right</p> <p>12 answers here.</p> <p>13 Okay. So this is, I believe, a clinic in</p> <p>14 Texas, which is, you know -- this is now thinking</p> <p>15 about hormone therapy, and we're using different</p> <p>16 scales to get at this -- this important question</p> <p>17 that we keep going back to is, well, what is the</p> <p>18 potential benefit or what is the measured benefit</p> <p>19 of the use of these aspects of gender-affirming</p> <p>20 care?</p> <p>21 So in this particular study, they're</p> <p>22 assessing things like body image, depression,</p> <p>23 anxiety, and using scales to sort of assess</p> <p>24 differences in these -- these -- in these</p> <p>25 features of their patient population before and</p>	<p>1 A I don't think that I have that information just</p> <p>2 from the abstract. We'd have to go to the method</p> <p>3 section to be sure.</p> <p>4 Q Let me scroll down then. Page 3. There it is.</p> <p>5 A Yeah. So it's 11 to -- go up a little bit.</p> <p>6 Yeah, so I think the follow-up survey was</p> <p>7 conducted for these -- the follow-up set of</p> <p>8 surveys were conducted, it looks like, in a range</p> <p>9 between 11 and 18 months.</p> <p>10 Q 18 months. Okay.</p> <p>11 And then if we scroll down to Table --</p> <p>12 Table 5, page 8. You see there it says, under</p> <p>13 "Suicide Attempt," one -- and then under the</p> <p>14 column "1 to 3 months before initial assessment,"</p> <p>15 3; and then I guess that's the percentage, which</p> <p>16 is 2; and then over in "Follow-Up Period," 6,</p> <p>17 which is 5 percent.</p> <p>18 Is that a statistically significant</p> <p>19 difference?</p> <p>20 MR. SELDIN: Object to form.</p> <p>21 A I don't -- I don't know.</p> <p>22 Q Okay. All right. Let's move to Exhibit 18.</p> <p>23 This is the Costa study.</p> <p>24 (Shumer Exhibit 18 marked.)</p> <p>25 Q Okay. Doctor, do you recognize this study?</p>
Page 210	Page 212
<p>1 after treatment.</p> <p>2 Q And what does it purport to show?</p> <p>3 A Well, there's improvement -- there's varying</p> <p>4 levels of improvement in different scales -- or</p> <p>5 scales that are measuring these elements of</p> <p>6 health. Right? So improvement in body -- a</p> <p>7 large improvement in body dissatisfaction, small</p> <p>8 to moderate in depressive symptoms, small</p> <p>9 improvement in total anxiety.</p> <p>10 So, you know, they're going on to describe,</p> <p>11 you know -- they're doing a bunch of tests,</p> <p>12 before, after. This is how much they changed</p> <p>13 over time and going into detail about each one.</p> <p>14 Q And, again, in terms of study design, is this</p> <p>15 another retrospective survey?</p> <p>16 MR. SELDIN: Object to form.</p> <p>17 A So I think this is -- no, this is not a</p> <p>18 retrospective survey. This is --</p> <p>19 Q Oh.</p> <p>20 A -- what we would call a -- you know, a</p> <p>21 longitudinal cohort design. So they're</p> <p>22 getting -- the same people are getting a survey</p> <p>23 at initial presentation and then in follow-up.</p> <p>24 Q Okay. Gotcha. And then the follow-up period was</p> <p>25 what? Just one year?</p>	<p>1 A Yes.</p> <p>2 Q And is this the same Costa study cited in</p> <p>3 paragraph 72 of your declaration?</p> <p>4 A Yes.</p> <p>5 MR. SELDIN: I apologize. Shawn, do you</p> <p>6 mind just scrolling down for a date -- or maybe</p> <p>7 it's on the side.</p> <p>8 A Yeah, Costa 2015. I think that we're on the</p> <p>9 right track here.</p> <p>10 BY MR. FISHER:</p> <p>11 Q Okay. So just tell us, if you would, please,</p> <p>12 what this study is purporting to show us.</p> <p>13 A Yep. So this is sort of another attempt to try</p> <p>14 to isolate the effect of GnRH agonist treatment</p> <p>15 and its effect on health outcome.</p> <p>16 So in this particular example, we're talking</p> <p>17 about something called the Children's Global</p> <p>18 Assessment Scale, which, you know, is, I believe,</p> <p>19 sort of an overall measure of -- of well-being</p> <p>20 and/or psychosocial functioning in adolescents.</p> <p>21 And so we're -- we're showing results of</p> <p>22 patients that had this assessment done prior to</p> <p>23 any intervention and then showing that there was</p> <p>24 improvement in their functioning after six months</p> <p>25 of psychological support and then also showing</p>

<p style="text-align: right;">Page 213</p> <p>1 the intervention of pubertal suppression having</p> <p>2 improvement in functioning as well, and then</p> <p>3 comparing people with pubertal suppression plus</p> <p>4 psychosocial support versus psychosocial support</p> <p>5 alone.</p> <p>6 There's a description of a greater</p> <p>7 improvement with the combined approach.</p> <p>8 Q Does it tell us anything about suppression alone?</p> <p>9 MR. SELDIN: Object to form.</p> <p>10 A So I think that's a hard thing to do, suppression</p> <p>11 alone -- right? -- because we all -- as I said</p> <p>12 before, we're not kind of living in a vacuum. So</p> <p>13 if we -- if we're seeing a patient and our</p> <p>14 standard of care is to provide psychosocial</p> <p>15 support to all of the patients we see, then, you</p> <p>16 know, making an arm of the study, you know,</p> <p>17 here's your -- here's your GnRH agonist, but</p> <p>18 we're not going to support you, you know,</p> <p>19 there's -- there's -- again, there's not</p> <p>20 equipoise there. That arm of the study no one</p> <p>21 would think would be better than a combination of</p> <p>22 psychosocial support plus GnRH agonist. So doing</p> <p>23 an arm of a study like that I don't think would</p> <p>24 be ethical.</p> <p>25 So, no, there's not a comparator arm where</p>	<p style="text-align: right;">Page 215</p> <p>1 MR. LANE: Hey, Tom, can we take this off</p> <p>2 the record for just a quick second?</p> <p>3 MR. FISHER: Yes.</p> <p>4 MR. LANE: Thanks.</p> <p>5 (Discussion held off the record.)</p> <p>6 BY MR. FISHER:</p> <p>7 Q Okay. Let's move on. I think we're ready for</p> <p>8 19, which is the Carmichael study.</p> <p>9 (Shumer Exhibit 19 marked.)</p> <p>10 Q Doctor, do you recognize this study?</p> <p>11 A I do.</p> <p>12 Q Is this the Carmichael study cited in</p> <p>13 paragraph 72 of your declaration?</p> <p>14 A It is.</p> <p>15 Q And what is this study telling us?</p> <p>16 A So, again, this is just trying to isolate the</p> <p>17 treatment with the GnRH agonists, which is, of</p> <p>18 course, just one element of gender-affirming care</p> <p>19 in young people. So trying to understand how</p> <p>20 treatment with these interventions may affect a</p> <p>21 variety of different things over a course of</p> <p>22 somewhere between 1 to 3 years. And so some of</p> <p>23 the things that they were measuring included bone</p> <p>24 mineral questions and mood questions.</p> <p>25 And so this is -- that is what this one is</p>
<p style="text-align: right;">Page 214</p> <p>1 there was someone just getting medical treatment</p> <p>2 without any psychosocial support. Likely for the</p> <p>3 reason that I just mentioned.</p> <p>4 Q Does it show results at different periods after</p> <p>5 treatment?</p> <p>6 MR. SELDIN: Object to form.</p> <p>7 A I believe the study has time points at 6 and</p> <p>8 12 months.</p> <p>9 Q Well, as I look at Table 2, which is on -- I</p> <p>10 don't know -- 2212 in the top corner in terms of</p> <p>11 page number.</p> <p>12 So is this telling us, it looks like, maybe</p> <p>13 three time periods?</p> <p>14 MR. SELDIN: Object to form.</p> <p>15 A So if we want to read this table together, it</p> <p>16 looks like there's four time periods. "Time 0"</p> <p>17 tends to imply before the study started or</p> <p>18 baseline. Right?</p> <p>19 Q Okay.</p> <p>20 A Then there's a Time 1, Time 2, and Time 3.</p> <p>21 Q Right. And so how many months between each of</p> <p>22 these periods?</p> <p>23 A I think six, but it doesn't say in the table, to</p> <p>24 be certain.</p> <p>25 Q Okay.</p>	<p style="text-align: right;">Page 216</p> <p>1 attempting to convey.</p> <p>2 Q All right. So let's look at page 19. Bottom</p> <p>3 right, it says 19 of 20 -- 19 over 26. Okay. So</p> <p>4 the paragraph --</p> <p>5 MR. FISHER: Maybe make that just a little</p> <p>6 bit bigger, Shawn. There we go.</p> <p>7 BY MR. FISHER:</p> <p>8 Q That paragraph right in front of us says, "We</p> <p>9 found no evidence of change in psychological</p> <p>10 function with GnRHa treatment as indicated by</p> <p>11 parent report (CBCL) or self-report (YSR) of</p> <p>12 overall problems, internalizing or externalizing</p> <p>13 problems or self-harm." Do you see that?</p> <p>14 A I do.</p> <p>15 Q Is that consistent with your understanding of</p> <p>16 this study?</p> <p>17 MR. SELDIN: Object to form.</p> <p>18 A Right. This is one of their findings, yes.</p> <p>19 Q All right. Let's go to Exhibit 20. Okay. This</p> <p>20 is the Achille.</p> <p>21 (Shumer Exhibit 20 marked.)</p> <p>22 Q So, Doctor, do you recognize this study?</p> <p>23 A I do.</p> <p>24 I always wondered how people would pronounce</p> <p>25 that last name. I always say Achille.</p>

<p style="text-align: right;">Page 217</p> <p>1 Q Oh, for me it called to mind Achilles.</p> <p>2 A I know. I know. I was -- I'm glad we're talking</p> <p>3 about it because it's bothered me.</p> <p>4 Q You're the one who would know. I better adapt</p> <p>5 myself.</p> <p>6 MR. SELDIN: Is one the French maybe?</p> <p>7 Q I'm sorry. So this study you cited in</p> <p>8 paragraph 72, I think also paragraph 76 of your</p> <p>9 declaration, by the way.</p> <p>10 A Yes.</p> <p>11 Q Okay. Right. So what is this -- what is this</p> <p>12 study telling us?</p> <p>13 A So this is kind of similar, assessing various</p> <p>14 elements of mental health and quality of life</p> <p>15 over the course of time. So, again, sort of a</p> <p>16 longitudinal cohort study. And I believe this</p> <p>17 time we're -- there's some gender hormone</p> <p>18 intervention mixed in, so not specific only to</p> <p>19 GnRH agonist treatment.</p> <p>20 Q And what does it purport to show from that study?</p> <p>21 A Well, there's a lot of findings. I think that</p> <p>22 ultimately there's improvement in many of the</p> <p>23 measured outcomes, you know, reducing depression</p> <p>24 scores, suicidal ideation scores, increasing</p> <p>25 quality of life scores.</p>	<p style="text-align: right;">Page 219</p> <p>1 a little different than the other studies because</p> <p>2 this is sort of saying, okay -- instead of doing</p> <p>3 before and after this one intervention, this is</p> <p>4 more, all right, these patients are coming to a</p> <p>5 clinic or a program that provides this type of</p> <p>6 care, and then we're sampling across three time</p> <p>7 points.</p> <p>8 In the course of those three time points,</p> <p>9 the patient will have been -- the patient in this</p> <p>10 clinic, presumably, they might have, you know,</p> <p>11 been treated with pubertal suppression; they</p> <p>12 might have been treated with pubertal suppression</p> <p>13 and that's all until the end of the study; or no</p> <p>14 treatment; or pubertal suppression and hormones</p> <p>15 later in the study.</p> <p>16 So it's basically saying, all right, these</p> <p>17 are three points in time, patients getting care</p> <p>18 at this place, and then measuring these --</p> <p>19 these -- these health indicators.</p> <p>20 So I think -- I would think of it as more of</p> <p>21 a, you know, being a patient in this clinic that</p> <p>22 provides gender-affirming care and what are the</p> <p>23 outcomes there, as opposed to discretely thinking</p> <p>24 about a specific intervention.</p> <p>25 Q Okay. Gotcha. All right. Let's go to</p>
<p style="text-align: right;">Page 218</p> <p>1 Q Looks like 50 participants?</p> <p>2 A Yep, that's what it looks like to me too.</p> <p>3 Q And so they measured at six-month intervals, but</p> <p>4 how many intervals?</p> <p>5 A Yeah. We're going to have to go to the method</p> <p>6 section for that.</p> <p>7 Q Okay.</p> <p>8 MR. FISHER: Let's scroll down. There we</p> <p>9 go.</p> <p>10 THE WITNESS: Can you go up a little bit. A</p> <p>11 little more. Okay. Sorry. Next page.</p> <p>12 A Okay. So there's three time points.</p> <p>13 BY MR. FISHER:</p> <p>14 Q Okay. Where are you looking? Is that the table?</p> <p>15 A The 50 that they included in the final conclusion</p> <p>16 completed three waves of questionnaires, in the</p> <p>17 result -- in the "Results" section.</p> <p>18 Q Oh. Between -- between 20 -- those</p> <p>19 questionnaires, is it your understanding that</p> <p>20 those occurred between December 2013 and December</p> <p>21 2018?</p> <p>22 MR. SELDIN: Object to form.</p> <p>23 A Yes.</p> <p>24 Q Okay.</p> <p>25 A Yep. So this is basically just, you know -- it's</p>	<p style="text-align: right;">Page 220</p> <p>1 Exhibit 21.</p> <p>2 (Shumer Exhibit 21 marked.)</p> <p>3 Q So this is van der Miesen. Also in paragraph</p> <p>4 72 -- or is this 76? No. Flip the page. Yes,</p> <p>5 there it is. van der Miesen.</p> <p>6 This is the same van der Miesen study cited</p> <p>7 in paragraph 72; is that correct?</p> <p>8 A Yes.</p> <p>9 Q Okay.</p> <p>10 A Yes.</p> <p>11 Q All right. So what is this study telling us?</p> <p>12 A Well, this one is, again, about GnRH agonists,</p> <p>13 and this is sort of comparing different measures</p> <p>14 of people right when they come into clinic before</p> <p>15 treatment and then people on treatment, and here</p> <p>16 they're -- you know, I think in a lot of the</p> <p>17 things that we've been talking -- the papers that</p> <p>18 we've been most recently talking about were using</p> <p>19 the longitudinal approach, so were using a</p> <p>20 patient as their control.</p> <p>21 This -- in this article, we're incorporating</p> <p>22 data from cisgender peers. So that's a little</p> <p>23 bit different. But that the people that came</p> <p>24 into clinic before treatment was started had</p> <p>25 higher self-harm rates, poorer peer relations</p>

<p style="text-align: right;">Page 221</p> <p>1 when compared to peers. Right?</p> <p>2 So then the adolescents on pubertal</p> <p>3 suppression, when compared to peers, had fewer of</p> <p>4 these types of problems.</p> <p>5 And so the -- and I -- so I think that, you</p> <p>6 know, this is sort of -- we've been talking a lot</p> <p>7 about how you've got to approach this tricky</p> <p>8 problem from a lot of different angles.</p> <p>9 So this one is saying not the same people</p> <p>10 across time, but these two groups now that are in</p> <p>11 different parts of this process, let's compare</p> <p>12 them to a control group, their peers. Right?</p> <p>13 So the people that are new patients before</p> <p>14 they started treatment don't look so favorable</p> <p>15 compared to peers. Over here, same point in</p> <p>16 time, but these patients here that probably came</p> <p>17 in a year ago now are on pubertal suppression,</p> <p>18 they're comparing better to their peers.</p> <p>19 Q So is this what's known as a cross-sectional</p> <p>20 study then?</p> <p>21 A Yes.</p> <p>22 Q Do cross-sectional studies establish causation?</p> <p>23 MR. SELDIN: Object to form.</p> <p>24 A Yeah, no. This is going back to that same</p> <p>25 problem with research in general, that you need</p>	<p style="text-align: right;">Page 223</p> <p>1 And so I think in this paper, you know, I</p> <p>2 would say that if I was to predict -- because I</p> <p>3 don't remember off the top of my head what their</p> <p>4 conclusion and limitation section would say. I</p> <p>5 would think that the strengths of this paper</p> <p>6 would be that, you know, it's a relatively large</p> <p>7 sample, that they're -- that, you know, this is a</p> <p>8 larger sample than a lot of the other studies</p> <p>9 that we've been talking about. There's a</p> <p>10 discrete difference between these two groups.</p> <p>11 And then they have these surveys that have really</p> <p>12 good data for the general population. So those</p> <p>13 are some of the strengths of the study.</p> <p>14 A limitation would be that, you know, yes,</p> <p>15 because of the nature of it being a</p> <p>16 cross-sectional study, that you can't -- you</p> <p>17 can't infer causation. You can think critically</p> <p>18 about whether you think the differences between</p> <p>19 the cohorts could represent causation.</p> <p>20 And then I always think about</p> <p>21 generalizability, as we've been talking. Right?</p> <p>22 So did these patients have something in common</p> <p>23 with the patients I see? So on the face of it,</p> <p>24 yes. Of course, there's probably</p> <p>25 differences: Different country, four years ago</p>
<p style="text-align: right;">Page 222</p> <p>1 to think critically about, you know, association</p> <p>2 versus causation and also generalizability. And</p> <p>3 so you can't get away from thinking about those</p> <p>4 topics in any research that you're reviewing.</p> <p>5 So in terms of association here, is there --</p> <p>6 there's one thing that's clearly different about</p> <p>7 these two groups. One of them is on pubertal</p> <p>8 suppression. So then if I'm -- if I'm thinking</p> <p>9 to myself, does that -- is that -- so does that</p> <p>10 establish causation? In and of itself, no.</p> <p>11 So then I'm going to say, well, are there</p> <p>12 other potential causes? Well, is just being a</p> <p>13 patient in this clinic improving their report --</p> <p>14 their scores? Maybe. Do I think so? I don't</p> <p>15 know. I don't think just being a participant in</p> <p>16 a clinic should, but it's something to consider.</p> <p>17 So I think that presumably then at the end</p> <p>18 of this paper and all papers, you know -- as</p> <p>19 we've been going through all of these papers, I</p> <p>20 just -- and I'm sure that there's similar things</p> <p>21 in legal papers -- but at the end of every paper,</p> <p>22 we're taught to say why we think our findings are</p> <p>23 important, what the potential limitations are,</p> <p>24 and then remind why we think we're still</p> <p>25 important.</p>	<p style="text-align: right;">Page 224</p> <p>1 versus today.</p> <p>2 So, yep, there's limitations to this study</p> <p>3 just like the other ones that we've been</p> <p>4 reviewing. But overall I would say that it's a</p> <p>5 helpful contribution to the literature.</p> <p>6 Q Let's take a look at page 703, and this will</p> <p>7 be -- yeah. It will be in the right-hand column</p> <p>8 on page 703.</p> <p>9 MR. FISHER: There we go. Now, scroll down</p> <p>10 just a little bit more. A little bit more.</p> <p>11 Okay. Right there.</p> <p>12 BY MR. FISHER:</p> <p>13 Q So right in the middle of the screen, Doctor, do</p> <p>14 you see where it says, "The present study can,</p> <p>15 therefore, not provide evidence about the direct</p> <p>16 benefits of puberty suppression over time and</p> <p>17 long-term mental health outcomes"? Do you see</p> <p>18 that?</p> <p>19 A I do see it.</p> <p>20 Q Do you agree with that statement?</p> <p>21 MR. SELDIN: Object to form.</p> <p>22 A Yeah. So I think picking out this one sentence</p> <p>23 in a long paragraph -- I guess, before I answer</p> <p>24 that question, I'd like to read the whole</p> <p>25 paragraph. If you could scroll up a little bit.</p>

<p style="text-align: right;">Page 225</p> <p>1 Thank you. Just give me a second, please.</p> <p>2 Q Sure.</p> <p>3 A Perfect. Thank you. Yeah. So it's sort of --</p> <p>4 like, I sort of predicted it would in the last</p> <p>5 answer that I gave -- right? -- that there's</p> <p>6 certain limitations to cross-sectional data --</p> <p>7 cross-sectional research. So the reader</p> <p>8 should -- should, you know, think about that when</p> <p>9 forming conclusions.</p> <p>10 I think that that sentence specifically is</p> <p>11 related to this causality question that you're</p> <p>12 raising, that the -- that just the nature of</p> <p>13 cross-sectional research doesn't provide evidence</p> <p>14 to direct benefit. And so, you know, that with</p> <p>15 the findings of this paper, you know, you</p> <p>16 consider that when thinking about how it may</p> <p>17 apply to the clinical decision that you're making</p> <p>18 in your office.</p> <p>19 Q Let's go to Exhibit 22.</p> <p>20 (Shumer Exhibit 22 marked.)</p> <p>21 Q This is the Allen paper. I think this is cited</p> <p>22 in paragraph 76 of your report.</p> <p>23 MR. SELDIN: Mr. Fisher, what do you think</p> <p>24 about a break after this paper?</p> <p>25 MR. FISHER: Yeah. Perfect.</p>	<p style="text-align: right;">Page 227</p> <p>1 clinics across the country, but the more patients</p> <p>2 in the study, the more generalizable it can be.</p> <p>3 So I use that as a -- you know, when I'm</p> <p>4 thinking about the importance of this study, I'm</p> <p>5 using that as sort of a factor, right? 47 is</p> <p>6 more than 30, less than a hundred.</p> <p>7 I think that when you're trying to answer a</p> <p>8 specific question, sometimes you need to figure</p> <p>9 out how many patients you would need in order to</p> <p>10 find a statistically significant difference. So</p> <p>11 if you have two patients in a study and you're</p> <p>12 testing an intervention, that is definitely --</p> <p>13 that definitely works, but they both get better,</p> <p>14 then your study is not very helpful. Right?</p> <p>15 Because you don't have the power to answer your</p> <p>16 question.</p> <p>17 So I'm taking note of the 47, and then I'm</p> <p>18 wanting to read more about, you know, the actual</p> <p>19 details of the study.</p> <p>20 Q What's your understanding of the duration? And</p> <p>21 we may have to scroll down to method. I don't</p> <p>22 know if it says on the front page or not.</p> <p>23 A Yep. So I think that this is an example of a</p> <p>24 study that's looking less at sort of a long-term</p> <p>25 outcome but a short-term outcome instead, that</p>
<p style="text-align: right;">Page 226</p> <p>1 A All right. I'm with you.</p> <p>2 BY MR. FISHER:</p> <p>3 Q Okay. So is this the -- is this the Allen paper</p> <p>4 that you cite in paragraph 76?</p> <p>5 A Yep. So in the expert report, now we're kind of</p> <p>6 moving on from focusing on GnRH agonists and now</p> <p>7 kind of more focused on gender-affirming hormone</p> <p>8 care.</p> <p>9 So, of course, some of the papers that we've</p> <p>10 discussed in the previous set of papers involve</p> <p>11 both, so I included those citations in the</p> <p>12 previous paragraph. But now we're just focusing</p> <p>13 on papers that are referring to gender-affirming</p> <p>14 hormones.</p> <p>15 Sorry to say the same thing twice there.</p> <p>16 Just wanted to get it straight in my head.</p> <p>17 Q Yeah.</p> <p>18 A Yep.</p> <p>19 Q Okay. So we have a -- again, another small</p> <p>20 sample size, 47 -- 47 youths?</p> <p>21 MR. SELDIN: Object to form.</p> <p>22 A This paper had 47 youths, yes.</p> <p>23 Q Yeah. Do you consider that a small sample size?</p> <p>24 A Well, you know, I think it's a lot for a study</p> <p>25 about a condition seen in, you know, small gender</p>	<p style="text-align: right;">Page 228</p> <p>1 immediately following the start of</p> <p>2 gender-affirming hormones, is there change in</p> <p>3 some of these mental health measures.</p> <p>4 And so in this -- so I think the</p> <p>5 contribution of this particular article to the</p> <p>6 literature is, you know, how does -- how do some</p> <p>7 of these mental health parameters change in the</p> <p>8 short term after a decision to start an</p> <p>9 intervention.</p> <p>10 Q So does it tell you what the duration was?</p> <p>11 A I don't see it on the screen, but I think that</p> <p>12 there was, I think, two measure points, and they</p> <p>13 were within a year apart, I want to say. But,</p> <p>14 you know, if we want to find the exact number of</p> <p>15 months, we can, but it is like -- granted, that</p> <p>16 this was a study that was looking at a short-term</p> <p>17 question --</p> <p>18 Q Short-term question.</p> <p>19 A -- so -- yeah. If we want to --</p> <p>20 Q So I want to look over on the -- under the</p> <p>21 limitations heading on page 308.</p> <p>22 A Can we -- sorry. Can I just --</p> <p>23 Q Yeah.</p> <p>24 A -- scroll down a little bit to read.</p> <p>25 Okay. Go ahead with your question. Sorry</p>

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1 to interrupt.

2 Q That's okay. Under "Limitations" -- page 308,

3 under the "Limitations" header, it gives us some

4 confounding variables that -- and I take it that

5 that means that these were not controlled for,

6 including familial support, receipt of

7 psychotherapy, difference in specifics of the

8 medications. Do you see that?

9 A I do.

10 Q Does that affect your ability to generalize from

11 this report?

12 MR. SELDIN: Object to form.

13 A Yep. So -- yeah, similarly, they're saying that,

14 you know -- they're testing a treatment for

15 gender dysphoria. So they're doing this in the

16 setting of a clinic that provides treatment for

17 gender dysphoria. And so inherent in that are

18 people that are supportive enough to bring their

19 child to the clinic. Right?

20 So I think what they're saying is, you

21 know -- do we know that this intervention will

22 work on children without that kind of support,

23 support enough to come to clinic, to come to

24 care? No, because we're not measuring them. So

25 in that way there's a limitation.

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1 Sort of like we've been talking about with

2 all of these studies. Then how do I approach

3 that when I'm trying to understand the

4 meaningfulness of the study? Does it make the

5 study completely invalid? Of course not. Right?

6 That, you know, we -- we use this to then

7 extrapolate on answering the clinical question

8 that we're asking about the patient that we're

9 seeing.

10 Q Okay. All right.

11 MR. FISHER: Let's go ahead and take our

12 break.

13 (Recess taken from 4:01 p.m. to 4:07 p.m.)

14 BY MR. FISHER:

15 Q Let's pull up -- I think we're ready for

16 Exhibit 23, and I want to take a look at the Chen

17 study, Psychosocial Functioning in Transgender

18 Youth.

19 (Shumer Exhibit 23 marked.)

20 Q Doctor, do you recognize this study?

21 A Yes.

22 Q Is this the same Chen study cited in this

23 paragraph 76 of your declaration?

24 A 76. Let's see. Yes.

25 Q Okay. So what is this study telling us?

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1 A Yep. So this is sort of another trying --

2 another study trying to answer a discrete

3 question about gender-affirming hormone care now,

4 and in this particular one it's looking at people

5 longitudinally, so the same person over time, pre

6 and post intervention, and assessing for outcomes

7 such as psychosocial functioning and feelings

8 about one's appearance.

9 Q And what does it conclude?

10 A I think the upshot is that there's improvement in

11 the outcomes that they were investigating after

12 treatment with hormonal care.

13 Q So at the beginning, how many of the subjects --

14 what percentage of the subjects had severe

15 depression?

16 MR. SELDIN: Object to form.

17 A We're going to have to get into the -- dive into

18 the study, I think, in a little more detail to

19 answer that question. I don't know that number

20 off the top of my head.

21 Q I'm just looking for it. I don't want to make

22 you look at every page, so -- let's go down to

23 Table 2, which is on page 245.

24 Okay. So, Doctor, as I look at that table,

25 I see a record of adverse events, which I

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1 understand to be during the study. And does this

2 tell us that two people died by suicide during

3 the study?

4 MR. SELDIN: Object to form.

5 A It does tell us that.

6 Q Was there -- do you know about whether the study

7 was stopped as a result of those suicides?

8 MR. SELDIN: Object to form.

9 A I don't -- I don't think the study was dis- -- I

10 don't believe the study was discontinued based on

11 those events, but I'm not certain of that.

12 Q And just to be clear, these were people who were

13 being treated with hormones who committed

14 suicide?

15 MR. SELDIN: Object to form.

16 A That's correct.

17 Q Do you know if there was any Institutional Review

18 Board inquiry of the study as a result of the

19 suicides?

20 MR. SELDIN: Object to form.

21 A I think these would be great questions for the

22 authors.

23 What I would say, though, is that

24 transgender people, whether they're participating

25 in studies, not participating in studies, on

<p style="text-align: right;">Page 233</p> <p>1 medications that overall have shown to be 2 helpful, not on medications that overall have 3 shown to be helpful, live in a world that's not 4 at times very easy for them to live in, that -- 5 that in -- in the lived experience of transgender 6 adolescents, that there's, you know, oftentimes 7 constant bullying, harassment, not only from 8 peers or family but from people in charge, and 9 that in the face of that, that that can be 10 overwhelming.</p> <p>11 Unfortunately in our country today, not only 12 for trans youth but for youth in general, 13 there's, you know, a higher rate of suicide and 14 suicidality than we would ever want. So the fact 15 that transgender people -- that some of them 16 experience suicide is terrible, of course, not 17 necessarily surprising, and that people on 18 effective treatment for gender dysphoria, you 19 know, can be improving in their gender dysphoria 20 but still live in the world that we live in, 21 which remains very challenging.</p> <p>22 So I don't know the answer to your question 23 about whether the study was discontinued or what 24 the IRB in this specific hospital decided when 25 that event happened, but I certainly empathize</p>	<p style="text-align: right;">Page 235</p> <p>1 Q Okay. Is there a reason to infer, given the 2 higher rate of participant -- the higher 3 completed suicide rate of participants in this 4 study compared to the general population, that 5 the gender-affirming treatment caused more 6 suicides?</p> <p>7 MR. SELDIN: Object to form.</p> <p>8 A Can you repeat that, please.</p> <p>9 Q Is it legitimate to infer from the higher suicide 10 rate among participants in this study, compared 11 to the general population, that the 12 gender-affirming treatment caused more suicides?</p> <p>13 MR. SELDIN: Object to form.</p> <p>14 A Yeah. See, now you're asking me the same 15 question but in reverse. You can't do it either 16 way. Right? So that, you know, when patients 17 are -- when patients have a positive outcome or a 18 negative outcome, you know, with these types of 19 studies, the answer to that question is unclear. 20 You've got to use your -- you've got to use your 21 executive functioning as a clinician to 22 understand, you know, what that might imply.</p> <p>23 So I think, you know, the fact that two 24 patients in this study died by suicide, you know, 25 that's a really important outcome in this study</p>
<p style="text-align: right;">Page 234</p> <p>1 with the providers of those patients, who -- who 2 I'm sure will always remember taking care of some 3 really challenged kids.</p> <p>4 Q Do you know how the suicide rate of the 5 participants in this study compares to the 6 suicide rate in the general population?</p> <p>7 MR. SELDIN: Object to form.</p> <p>8 A Well, I don't know if I can rattle off numbers. 9 But, you know, we do know, of course, that -- are 10 you saying suicide rate or suicidality?</p> <p>11 Q Suicide rate. Completed suicide rate.</p> <p>12 A Yes. So it's certainly going to be higher 13 because the --</p> <p>14 Q I'm sorry. Higher where? In the study?</p> <p>15 A That's correct.</p> <p>16 Q Okay. Completed suicide rate in the study is 17 higher than in the general population, correct?</p> <p>18 MR. SELDIN: Object to form.</p> <p>19 A That is correct.</p> <p>20 Q Okay. Do we know whether the suicide -- 21 completed suicide rate of participants in this 22 study is higher than the trans population 23 overall?</p> <p>24 MR. SELDIN: Object to form.</p> <p>25 A I don't know the answer to that question.</p>	<p style="text-align: right;">Page 236</p> <p>1 that I think people take note of.</p> <p>2 I think that that's in the context of the 3 very high suicidality rate amongst trans people 4 and in the broader context of -- you know, we've 5 been talking about suicide and suicidality a lot 6 today, across a lot of different studies, and so 7 certainly if you -- if you're wanting to say that 8 treatment is causative in this particular 9 instance and not causative of the positive 10 outcomes in all of the other studies that we've 11 just mentioned, then, of course, that doesn't 12 make sense.</p> <p>13 So there's got to be some more nuanced 14 answer. Right? The nuanced answer is that it's 15 complicated. We need to take all of these 16 studies as a collective, figure out how we want 17 to use each of these studies in our mental 18 construct of this very complicated question, how 19 to help a group of really suffering kids, and -- 20 and so, you know, the -- I think the -- this 21 really -- these two tragic patients, you know, 22 are important to think about and consider when 23 we're analyzing this paper and also in the 24 context of the broad body of work that we've been 25 discussing all day today.</p>

<p style="text-align: right;">Page 237</p> <p>1 Q All right. Let's move on to the next exhibit. 2 So I think we're up to 24 now. So this will be 3 the -- I'm going to butcher this pronunciation, 4 Cecillia Dhejne -- not Grannis. This is 5 D-H-E-J-N-E. 6 (Shumer Exhibit 24 marked.) 7 A I think it's pronounced "Dane." 8 Q "Dane." Thank you very much. 9 A Uh-huh. 10 Q Now, this is not a study that you cite in your 11 report, but are you familiar with this study? 12 A You know, I think I have seen this study more 13 recently. But if we can zoom in a little bit, 14 that would be helpful. 15 Q Sure. 16 A Okay. I'm with you. Yes, I have seen it before. 17 Q You've seen it before. Okay. What do you 18 understand this study to show? What conclusions 19 does it draw? 20 MR. SELDIN: Object to form. 21 A Yeah. So this is specifically about surgery, and 22 so we're getting a little bit outside of my 23 wheelhouse as an endocrinologist, but this is 24 talking about, I believe, gender-affirming 25 genital surgery in Sweden, and it's -- it's</p>	<p style="text-align: right;">Page 239</p> <p>1 A I do. 2 Q What is this document? 3 A This is the -- a document published by the 4 Endocrine Society. It's a clinical practice 5 guideline related to providing the type of care 6 that we've been discussing today. 7 Q Okay. What role does it play, or of what utility 8 is it in your practice? 9 A Well, you know, I think that we've been talking 10 about a whole bunch of different papers today 11 that, you know, not too many people have maybe 12 the time or the knowledge to sort through and 13 read and analyze by themselves. Right? 14 And so, you know, I think that -- let me 15 just use an example here. Like, if I wanted to 16 know a simple question about, you know, the use 17 of a thyroid medicine, is one brand better than 18 the other, I might independently be able to find 19 a good study to answer that question. Right? 20 But faced with a larger question, like how 21 do we approach gender dysphoria, you know, that 22 requires, you know, a careful review of a lot of 23 pieces of evidence. 24 And so I think that the Endocrine Society, 25 they have in several instances tried to help</p>
<p style="text-align: right;">Page 238</p> <p>1 talking about health outcomes, specifically 2 important outcomes like suicide, suicidality, and 3 sort of the conclusion is a higher -- that 4 suicidality -- or higher -- higher risk for 5 mortality, suicide behavior, and psychiatric 6 morbidity than the general population after this 7 type of surgery. That the surgery helps with 8 gender dysphoria but that by itself was not 9 sufficient for this cohort of patients analyzed. 10 Q Any particular reason you didn't include this 11 study in your report? 12 A Well, I'd say one reason is I didn't really talk 13 about surgery in my report, but I'm happy to 14 discuss it now with you. 15 Q No. That's okay. I just wondered. All right. 16 Let's move on to -- I guess we're up to 25. 17 Okay. 18 (Shumer Exhibit 25 marked.) 19 Q Okay. I want to get up here the endocrine -- 20 this is the Endocrine Society Guidelines. 21 Endocrine treatment of gender dysphoria it says 22 at the top. 23 There we go. 24 And so, Doctor, do you recognize this 25 document?</p>	<p style="text-align: right;">Page 240</p> <p>1 people in this field by doing that review and 2 providing suggestions and recommendations related 3 to care. So this being one example. 4 There's several other examples of clinical 5 practice guidelines, sort of along those same 6 lines, kind of complicated topics in 7 endocrinology that providers in the field would 8 benefit from sort of an overview and some 9 guidance. 10 Q Okay. All right. Let's go to the next exhibit. 11 So this will be 26. This will be the Standards 12 of Care for the Health of Transgender and Diverse 13 People. 14 (Shumer Exhibit 26 marked.) 15 MR. FISHER: There we go. 16 BY MR. FISHER: 17 Q Doctor, do you recognize this document? 18 A I do. 19 Q And what is this document? 20 A This is the Standards of Care for the Health of 21 Transgender and Gender Diverse people, Version 8, 22 published by the World Professional Association 23 of Transgender Health. 24 Q What does this perform in your practice? 25 MR. SELDIN: Object to form.</p>

<p style="text-align: right;">Page 241</p> <p>1 A Well, you know, I think that the -- I think that</p> <p>2 both this and Endocrine Society Guidelines that</p> <p>3 we just reviewed are two different attempts to</p> <p>4 sort of bring together evidence and either</p> <p>5 provide recommendations or standards of practice</p> <p>6 based on that evidence.</p> <p>7 So I think they're -- they function -- it</p> <p>8 functions in a similar way. I think there's</p> <p>9 differences. For, one, the endocrine documents</p> <p>10 is much more focused on the medical management of</p> <p>11 gender dysphoria, whereas these standards of care</p> <p>12 have a larger breadth and scope of health in</p> <p>13 general for trans people.</p> <p>14 But when it comes down to, like, the actual</p> <p>15 content that impacts practice, they're quite</p> <p>16 similar.</p> <p>17 Q Okay. So now we're ready for 27, and this will</p> <p>18 be the document. It says "Recommendation of the</p> <p>19 Council for Choices" on it.</p> <p>20 (Shumer Exhibit 27 marked.)</p> <p>21 Q Doctor, are you familiar with this document?</p> <p>22 A I wouldn't say that I'm intimately familiar with</p> <p>23 all of the details, but I'm aware of its</p> <p>24 existence, yes.</p> <p>25 Q So have you read it before?</p>	<p style="text-align: right;">Page 243</p> <p>1 present it to -- present it in some sort of</p> <p>2 written form.</p> <p>3 So I would suggest that in both the WPATH</p> <p>4 document and the Endocrine document, they go</p> <p>5 through at length about how they determined all</p> <p>6 of the relevant articles that they included,</p> <p>7 and -- and, therefore, I think the term</p> <p>8 "systematic review" fits in both of those cases.</p> <p>9 This may or may not be a systematic review.</p> <p>10 I'm just not as familiar with the methodology on</p> <p>11 which it was written to definitively answer that</p> <p>12 question, as I'm more familiar with those other</p> <p>13 two documents.</p> <p>14 Q So let's take a look at page 7 of this document.</p> <p>15 Okay.</p> <p>16 MR. FISHER: So let's make that a little bit</p> <p>17 bigger so we can see it.</p> <p>18 Oh, there we go. Great.</p> <p>19 BY MR. FISHER:</p> <p>20 Q Can you read that okay, Doctor?</p> <p>21 A Yep.</p> <p>22 Q So the paragraph that begins with, "In cases of</p> <p>23 children and adolescents," just if you could just</p> <p>24 read that paragraph to yourself and just let me</p> <p>25 know when you're ready.</p>
<p style="text-align: right;">Page 242</p> <p>1 A I have read it before, yes.</p> <p>2 Q What do you understand it to be?</p> <p>3 A So I understand it to be an effort in the country</p> <p>4 of Finland to think sort of critically about how</p> <p>5 the country should provide gender-affirming care</p> <p>6 to its population.</p> <p>7 Q Is this what might be called -- or what is called</p> <p>8 in the scientific community a systematic review?</p> <p>9 MR. SELDIN: Object to form.</p> <p>10 A I don't know if that is an appropriate term or</p> <p>11 not, but maybe if we scroll down I can better</p> <p>12 answer that question.</p> <p>13 Q Okay.</p> <p>14 A Yeah. I mean, I'm not sure if I can agree or not</p> <p>15 agree with whether this is a systematic review.</p> <p>16 I think of it as, like, a governmental document</p> <p>17 to inform care for the country of Finland.</p> <p>18 Q Was either the WPATH guidelines or the Endocrine</p> <p>19 Society Guidelines a systematic review?</p> <p>20 A Well, you know, I think you're asking -- you're</p> <p>21 saying the words "systematic review." So let's</p> <p>22 unpack that for a second. To me a systematic</p> <p>23 review is an attempt to take a question or a</p> <p>24 topic and attempt to review every -- every piece</p> <p>25 of relevant literature about that topic and then</p>	<p style="text-align: right;">Page 244</p> <p>1 A I've completed reading the paragraph.</p> <p>2 Q Okay. Great. So this is talking about treating</p> <p>3 children and adolescents with gender dysphoria;</p> <p>4 is that your understanding?</p> <p>5 MR. SELDIN: Object to form.</p> <p>6 A Well, I guess it is in some way. I think that</p> <p>7 this is a -- you know, this is quite a different</p> <p>8 type of manuscript than the two we've been</p> <p>9 reviewing before in that the previous two were,</p> <p>10 you know, written for healthcare professionals in</p> <p>11 order to review what the evidence might suggest</p> <p>12 in terms of, you know, medical decision-making.</p> <p>13 This is -- this is a government-produced</p> <p>14 document that's informing, you know, a -- a</p> <p>15 process that's run by a governmental health</p> <p>16 system which, in fact, does still provide</p> <p>17 gender-affirming care to youth.</p> <p>18 So I would say that, yes, it's -- the topic</p> <p>19 of this is treatment of trans youth but in a --</p> <p>20 sort of a different context than the reviews that</p> <p>21 we've been discussing previously.</p> <p>22 Q So it says that ethical issues are concerned with</p> <p>23 the natural process of adolescent identity,</p> <p>24 development, and the possibility that medical</p> <p>25 intervention may interfere with this process.</p>

<p style="text-align: right;">Page 245</p> <p>1 Just that observation about the ethical 2 issues, do you agree with that or disagree with 3 it, or do you have an opinion about it? 4 MR. SELDIN: Object to form. 5 A Well, there's a few different parts of that 6 sentence. Right? So I think that there's 7 ethical issues in all aspects of medicine, and, 8 you know, I think that, for example, as a -- as a 9 clinician, you know, I think I'm trying to 10 practice ethical medicine every day. 11 So I would consider every patient that I see 12 to present with some sort of ethical challenge 13 that I'm trying to do no harm and provide 14 high-quality care. 15 That the second part of that sentence 16 related to medical interventions interfering with 17 gender identity development, I don't agree with 18 that statement, no. 19 Q Okay. So do you find this document to be -- or 20 when you read it, did you find it to be useful at 21 all in your understanding of the appropriate 22 treatment of gender dysphoria? 23 MR. SELDIN: Object to form. 24 A Well, it's certainly not a document that is, you 25 know, written to provide recommendations to</p>	<p style="text-align: right;">Page 247</p> <p>1 and forming a plan. 2 So do I rely on this document to inform my 3 clinical care? I do not. 4 But I am following topics like this to see 5 how -- you know, how healthcare around the world 6 is being performed and how people are making 7 decisions based on reviewing the same literature 8 that we've been discussing together. 9 Q So on the prior page of this report, under 10 ethical assessment -- there we go -- that second 11 paragraph says -- and, again, we're talking here 12 about treatment of gender dysphoria. The second 13 sentence of that second paragraph, it says "As 14 far as minors are concerned, there are no medical 15 treatment that can be considered evidence-based." 16 Do you see that statement? 17 A I do see the statement. 18 Q What is your reaction to that statement? 19 A Well, I think it's the -- probably the topic that 20 we've been talking over the last three hours 21 about, you know. We've been reviewing the 22 evidence and so, you know, I don't know -- you 23 know, in terms of translation from Finnish to 24 English but, you know, their statement that no 25 medical treatment can be considered</p>
<p style="text-align: right;">Page 246</p> <p>1 healthcare clinicians. I think that my takeaway 2 from this is that, you know, everyone around the 3 world is wanting to do the best they can to treat 4 children who are struggling, especially 5 struggling with, in this case, gender dysphoria, 6 that the system of healthcare in Finland, of 7 course, while different than that in the United 8 States, I think, is at its core rooted in trying 9 to make the population of that country as healthy 10 and productive and happy as possible. 11 So I think that in this particular 12 situation, the -- the authors of this manuscript, 13 you know, are reviewing evidence and then 14 thinking to themselves, well, how does this apply 15 to healthcare in Finland? In the end, they've 16 come up with a system that seems to be, you know, 17 different than every other -- every other -- 18 every country has their own system of healthcare. 19 Now, I'm not an expert on this, but how I 20 understand it is that young people with gender 21 dysphoria in Finland are still treated with 22 gender-affirming care. And there's a system in 23 place that they have organized based on a bunch 24 of, presumably, medical professionals and 25 politicians and healthcare people coming together</p>	<p style="text-align: right;">Page 248</p> <p>1 evidence-based, you know, doesn't sound right to 2 me. 3 You know, maybe their meaning is that the 4 evidence that they reviewed makes them determine 5 that medical treatment isn't necessary or 6 something like that. But, of course, there is 7 evidence that, you know, we've been talking all 8 day about together. 9 Q So let's go to page -- looks like page 10, right 10 above the number 9. Okay. So right there, right 11 in the -- just right above number 9, it says, 12 "Surgical treatments are not part of the 13 treatment methods for dysphoria caused by 14 gender-related conflicts in minors." Do you see 15 that statement? 16 A I do. 17 Q What is your reaction to that statement? 18 A I don't have much of a reaction. It sounds like 19 they're not -- patients in Finland that have 20 gender dysphoria neither before nor after the 21 writing of this report were being treated with 22 surgical interventions. 23 Q All right. Let's move to 28, which is a document 24 called "A systematic review of hormone treatment 25 for children."</p>

<p style="text-align: right;">Page 249</p> <p>1 (Shumer Exhibit 28 marked.)</p> <p>2 MR. FISHER: Make that a little bit bigger.</p> <p>3 There we go. Maybe the doctor needs to see the</p> <p>4 top of that. Let's just make sure -- there we</p> <p>5 go.</p> <p>6 BY MR. FISHER:</p> <p>7 Q Doctor, does this document look familiar to you?</p> <p>8 A I have seen this before, yes.</p> <p>9 Q Have you read it?</p> <p>10 A I have.</p> <p>11 Q And what do you understand it to be?</p> <p>12 A So this is, you know, I think that --</p> <p>13 THE WITNESS: Can you scroll down just a</p> <p>14 little bit to help me recall if it's just --</p> <p>15 okay. Thank you. Yep.</p> <p>16 A So I think that the people that wrote this study</p> <p>17 are, you know, trying to sort through this</p> <p>18 question that we've been sorting through</p> <p>19 together, you and I. You know, what is the --</p> <p>20 what is the evidence that informs the statement</p> <p>21 made by organizations such as the WPATH and the</p> <p>22 Endocrine Society, to make them recommend</p> <p>23 gender-affirming care?</p> <p>24 And so the -- that the folks who wrote this,</p> <p>25 you know, clearly outline sort of how they</p>	<p style="text-align: right;">Page 251</p> <p>1 A Yeah. So, again, when we use the words</p> <p>2 "systematic review," I think to me that implies</p> <p>3 that I'm -- at the onset, here's my question,</p> <p>4 here's my search strategy. I'm sort of putting</p> <p>5 it all out there for the reader to look at, and</p> <p>6 then here's what I found in my results. So, yes,</p> <p>7 this is a systematic review.</p> <p>8 Q Do you have any reason to be critical of the</p> <p>9 system that they use, the selection of papers</p> <p>10 they deemed relevant?</p> <p>11 MR. SELDIN: Object to form.</p> <p>12 A Well, you know, I'm not sure I can answer that</p> <p>13 question with certainty. I think that -- you</p> <p>14 know, I'm not sure that there is -- that I have</p> <p>15 necessarily a specific objection to the</p> <p>16 methodology they use in their systematic review.</p> <p>17 But I think that, you know, for the purposes of</p> <p>18 conclusions, you know, when I review the</p> <p>19 literature that they review, that we come to</p> <p>20 different conclusions, that, you know, I think</p> <p>21 that -- you know, I'm just struck by the notion</p> <p>22 that a lot of the, you know, well-accepted</p> <p>23 medicine that we do in this country, in the</p> <p>24 world, you know, is -- has to do with complex</p> <p>25 questions that don't have simple answers.</p>
<p style="text-align: right;">Page 250</p> <p>1 identified the articles that they reviewed. Then</p> <p>2 they, you know, come to a conclusion about what</p> <p>3 the -- some of the evidence means.</p> <p>4 So I think their conclusion is that -- you</p> <p>5 know, and they make some of the same points that</p> <p>6 we've been discussing, of course, no randomized</p> <p>7 control trials, not possible to do, and, you</p> <p>8 know, sample sizes are small in certain studies.</p> <p>9 If we scroll up for a little bit -- and so I</p> <p>10 think that the conclusion that they reach is in</p> <p>11 some ways different than from the other documents</p> <p>12 that we've been discussing, that they are --</p> <p>13 well, I don't know. Is that -- is that what you</p> <p>14 wanted me to --</p> <p>15 BY MR. FISHER:</p> <p>16 Q You can stop there if you want. I'll ask another</p> <p>17 question. It's okay.</p> <p>18 A Go ahead. Yeah.</p> <p>19 MR. SELDIN: Doctor, you don't have to do</p> <p>20 both sides of this. Just give the answers, not</p> <p>21 the questions. Mr. Fisher still needs a job.</p> <p>22 BY MR. FISHER:</p> <p>23 Q Doctor, do you understand this review to be a</p> <p>24 systematic review?</p> <p>25 MR. SELDIN: Object to form.</p>	<p style="text-align: right;">Page 252</p> <p>1 And that for this particular example, the --</p> <p>2 you know, they've chosen to rely on the studies</p> <p>3 that they've identified. I think they have maybe</p> <p>4 a stronger tendency to diminish the impact of</p> <p>5 studies with smaller sample size, to put less</p> <p>6 impact on certain types of methodological</p> <p>7 studies. And so, you know, it's okay that they</p> <p>8 have a difference of opinion when reviewing the</p> <p>9 literature, and so when I -- you know, when I'm</p> <p>10 asked, you know, does this impact how I consider</p> <p>11 my approach to -- to gender-affirming care, you</p> <p>12 know, I would say that just like any aspect of my</p> <p>13 practice, that I am always wanting to keep up to</p> <p>14 date with the science, with new publications.</p> <p>15 And if, for example, you know, there's</p> <p>16 evidence that suggests this aspect of your</p> <p>17 practice should change because now there's</p> <p>18 stronger evidence in this regard or that regard,</p> <p>19 then I am -- I would be excited to read it and</p> <p>20 then change practice because that would mean an</p> <p>21 improvement in health and quality of life for the</p> <p>22 patients that I'm seeing.</p> <p>23 If you're asking at this time do I agree</p> <p>24 with the sort of upshot of the conclusion of the</p> <p>25 systematic review, the answer is no. That</p>

<p style="text-align: right;">Page 253</p> <p>1 doesn't necessarily mean that the -- you know, 2 the methodology that they used is incorrect. 3 But, you know, I think that the conclusions that 4 they make are not in keeping with the conclusions 5 that every major mainstream medical organization 6 in the U.S. has made on this topic. 7 Q Have those mainstream medical organizations 8 undertaken systematic reviews such as this one to 9 come to those conclusions? 10 MR. SELDIN: Object to form. 11 A Well, WPATH and the Endocrine Society, yes. 12 Q Have they been transparent about the studies that 13 they've included? 14 MR. SELDIN: Object to form. 15 A I would say in both cases, I think they do a nice 16 job of outlining how they've -- how they went 17 about the process of writing their manuscript, 18 yes. 19 THE WITNESS: If I may, I just -- I had a 20 voice mail, and I'm just wondering if it has to 21 do with family, so if this might be a good time. 22 (Recess taken from 4:47 p.m. to 4:51 p.m.) 23 BY MR. FISHER: 24 Q Now let's mark -- I guess we're up to 29, I 25 think, and this would be -- this is Evidence</p>	<p style="text-align: right;">Page 255</p> <p>1 the information I need to answer that question. 2 I do believe that they describe how they -- how 3 they included papers, and so in that regard you 4 could consider it a systematic review. 5 But I apologize. I'm not sure that I have 6 more expertise to answer that question regarding 7 this particular document. 8 Q Well, to the extent that you've studied it, did 9 you have any criticism or do you remember having 10 any criticism for the way that the author went 11 about selecting the studies to be reviewed? 12 MR. SELDIN: Object to form. 13 A I don't recall a specific criticism about study 14 inclusion, no. 15 Q Are you familiar with the conclusions drawn by 16 the author? 17 A Well, I think that there's probably a lot of 18 different conclusions. I think that with each -- 19 if we'd like to scroll through, we can. But I 20 think in general the author is reviewing each 21 article one at a time and sort of citing relative 22 strengths and weaknesses of each article. 23 I think the upshot, similar to our 24 discussion about the Finnish review, is that the 25 end conclusions differ from that of the WPATH and</p>
<p style="text-align: right;">Page 254</p> <p>1 Reviews: Gonadotrophin releasing hormone 2 analogues for children. 3 MR. FISHER: Can we make it just a little 4 bit bigger so doctor can see it. 5 (Shumer Exhibit 29 marked.) 6 Q Doctor, have you seen this document before? 7 A I have. 8 Q Can you describe what it is, please. 9 A This one comes from the UK, and I believe that -- 10 I'm not sure what kind of -- I'm not sure of the 11 profession of Dr. Cass, but that the author here 12 is attempting to review specifically the question 13 of GnRH analogues for children with gender 14 dysphoria, and to present to, I think, a 15 government -- for a governmental purpose, I 16 believe, similarly in trying to -- to decide on 17 how gender dysphoria management will occur at the 18 public health system in the UK. 19 Q Have you read this document entirely? 20 MR. SELDIN: Object to form. 21 A I'm not sure if I read it entirely. I think I've 22 read -- if not entirely, most of it. 23 Q Do you understand this to be a systematic review? 24 MR. SELDIN: Object to form. 25 A You know, again, I don't know that I have all of</p>	<p style="text-align: right;">Page 256</p> <p>1 Endocrine Society recommendations, that the 2 conclusion is that in order to -- yeah. No, I 3 don't remember if they're making a treatment 4 recommendation in this or they're just commenting 5 on the degree of evidence. 6 You know, I think, again, the difference 7 between this type of review and clinical practice 8 guidelines are that clinical practice guidelines 9 or standards of care are really intended for a 10 clinician to make clinical decisions about 11 specific patients. Right? And that this -- this 12 type of review is written to -- with a slightly 13 different purpose to inform, you know, health -- 14 healthcare decisions. 15 And so while I may disagree with some of the 16 ultimate conclusions from this report, I also am 17 aware that in the United Kingdom adolescents with 18 gender dysphoria continue to receive 19 gender-affirming care in spite of or alongside 20 this report. 21 Q Is this report relevant to your understanding of 22 the science behind gender-affirming care? 23 MR. SELDIN: Object to form. 24 A Yeah, I think that my answer is probably exactly 25 the same as how I commented in the Finnish</p>

<p style="text-align: right;">Page 257</p> <p>1 article, because I think that there's a lot of 2 commonality there.</p> <p>3 So not necessarily how I interact with 4 clinical decision-making, but I understand that 5 people can review a lot of similar literature and 6 come to different conclusions about different 7 questions. Right?</p> <p>8 So I think I'm asking clinical questions in 9 the office so I'm going to be relying primarily 10 on clinical practice guidelines. You know, I'm 11 not making nationalized health plan decisions for 12 a European country. So it's a little different 13 there.</p> <p>14 But, no, it doesn't inform my care to that 15 degree. No.</p> <p>16 Q Okay. All right. Let's look at Exhibit 30 -- 17 what we'll mark as Exhibit 30. It says "Evidence 18 Review: Gender-affirming hormones for children 19 and adolescents." 20 (Shumer Exhibit 30 marked.)</p> <p>21 MR. FISHER: There we go. Make that a 22 little bit bigger.</p> <p>23 BY MR. FISHER:</p> <p>24 Q Doctor, are you familiar with this document? 25 A Yep. So this is almost exactly the same idea as</p>	<p style="text-align: right;">Page 259</p> <p>1 different question, I guess. But that 2 ultimately, in spite of or alongside this 3 document, the adolescents in the United Kingdom 4 who do meet criteria for gender dysphoria are 5 still receiving gender-affirming care.</p> <p>6 Q Do you remember when reading this document if you 7 had any criticisms of the literature that the 8 author decided to include in the review?</p> <p>9 MR. SELDIN: Object to form.</p> <p>10 A I don't recall specific criticisms.</p> <p>11 Q So I guess I'm wondering, do you think that 12 Dr. Hilary Cass, who did both of these reviews, 13 made -- arrived at unreasonable conclusions based 14 on the evidence she reviewed?</p> <p>15 MR. SELDIN: Object to form.</p> <p>16 A I think reasonable people can come to different 17 conclusions based on similar evidence, but I 18 would disagree with her conclusions.</p> <p>19 Q Okay. What about the Sweden systematic review, 20 28 -- let's put 28 back up, if we could, please.</p> <p>21 Do you think that the authors of this paper 22 arrived at unreasonable conclusions based on the 23 evidence?</p> <p>24 MR. SELDIN: Object to form.</p> <p>25 A Yeah. So I guess this one, I guess I'm going to</p>
<p style="text-align: right;">Page 258</p> <p>1 the one we just were reviewing before, but this 2 time instead of talking about gender -- GnRH 3 agonists, it's a review of gender-affirming 4 hormone care. Same author, same country, same 5 questions.</p> <p>6 Q Have you read this document before? 7 A I have.</p> <p>8 Q And you understand it, like the other one, to be 9 a systematic review?</p> <p>10 MR. SELDIN: Object to form.</p> <p>11 A Yeah. I think that the -- the same answer. I 12 think that the authors outlined sort of how they 13 came up with their first criteria, I believe, if 14 I'm remembering correctly, and that informed sort 15 of the body of this document going through 16 studies, describing strengths and weaknesses, 17 coming up with conclusions this time related to 18 hormonal care.</p> <p>19 Again, not a document designed to answer 20 clinical questions for healthcare providers but 21 to answer questions related to how healthcare is 22 provided in the public sphere in the United 23 Kingdom, as I understand it.</p> <p>24 The conclusions, you know, reached, while 25 different than mine, are sort of asking a</p>	<p style="text-align: right;">Page 260</p> <p>1 need a refresher on a conclusion that you're 2 referring to because there's a lot of different 3 conclusions, I think.</p> <p>4 Q Well, let's see here. So let's turn to page 4. 5 And at the bottom, there's a paragraph -- yeah, 6 there you go. Can you read that okay? Maybe 7 it's cut off.</p> <p>8 There we go. Can you read that okay, 9 Doctor?</p> <p>10 A Yes.</p> <p>11 Q So I'm looking at the paragraph that begins 12 "Because these studies."</p> <p>13 A Yes.</p> <p>14 Q Okay. So I'll just read it. "Because these 15 studies were hampered by a small number of 16 participants and substantial risk of selection 17 bias, the long-term effects of hormone treatment 18 on psychosocial health could not be evaluated. 19 Of note, the above studies do not allow 20 separation of potential effects of psychological 21 intervention independent hormonal effects." 22 Now, my understanding is that you disagree 23 with that statement?</p> <p>24 MR. SELDIN: I'm sorry, Tom. You cut out. 25 Did you read to the end of the paragraph?</p>

<p style="text-align: right;">Page 261</p> <p>1 MR. FISHER: Oh, you want -- I need to read</p> <p>2 the paragraph again?</p> <p>3 MR. SELDIN: Well, I just --</p> <p>4 A I can read it but --</p> <p>5 MR. FISHER: Doctor's frozen up. Doctor,</p> <p>6 your video is frozen. I hope that our connection</p> <p>7 is good.</p> <p>8 THE WITNESS: All right. Is that better</p> <p>9 now?</p> <p>10 BY MR. FISHER:</p> <p>11 Q There we go. Yep.</p> <p>12 So that paragraph --</p> <p>13 A Yeah. Yeah. I think that you cut out during the</p> <p>14 paragraph. But, yes, I read it too.</p> <p>15 Q You may disagree with that statements -- with</p> <p>16 those two statements?</p> <p>17 A Yeah. So I don't think I would write this</p> <p>18 paragraph exactly the same way. I would say</p> <p>19 that, you know, for reasons that we've discussed</p> <p>20 all afternoon.</p> <p>21 Some of these studies have smaller numbers</p> <p>22 of participants than, you know -- than in other</p> <p>23 areas of research. You know, we talked a little</p> <p>24 bit about selection bias which, you know, we</p> <p>25 discussed how relevant that is to clinical</p>	<p style="text-align: right;">Page 263</p> <p>1 isolate that. And I -- in my estimation, the --</p> <p>2 the result of that journey is that, yes, we are</p> <p>3 able to separate the fact that hormonal effects</p> <p>4 independently improve health.</p> <p>5 Q These authors reached a different conclusion.</p> <p>6 And just so we can put it in terms of a</p> <p>7 conclusion, let's turn over to page 12, under the</p> <p>8 heading of "Conclusion." There we go.</p> <p>9 Doctor, I don't think that this paragraph is</p> <p>10 saying anything we haven't already said, but go</p> <p>11 ahead and read it. Just let me know when you're</p> <p>12 ready.</p> <p>13 A That little paragraph under "Conclusion"?</p> <p>14 Q That's right. Yes.</p> <p>15 A Right. So, yep, that's sort of similar to the</p> <p>16 sentences we just discussed, yes.</p> <p>17 Q So you've reached one conclusion. They've</p> <p>18 reached a different conclusion. And all I'm</p> <p>19 asking is whether their conclusion is</p> <p>20 unreasonable.</p> <p>21 MR. SELDIN: Object to form.</p> <p>22 A I think I would -- I would say that I strongly</p> <p>23 disagree with their conclusion. I'm not sure I</p> <p>24 like the word "unreasonable" because I think it</p> <p>25 implies that there's mal intent or something.</p>
<p style="text-align: right;">Page 262</p> <p>1 practice. Their conclusion on "the long-term</p> <p>2 effects of hormone treatment on psychosocial</p> <p>3 health could not be evaluated," no, I wouldn't</p> <p>4 agree with that.</p> <p>5 I would say that in each of these studies</p> <p>6 we're learning more about different impacts on</p> <p>7 psychosocial health, that, you know, the --</p> <p>8 there's certainly, you know, I think in all areas</p> <p>9 of medicine an anticipation that research will</p> <p>10 continue to be done to add to our growing body of</p> <p>11 literature. But I wouldn't agree that the</p> <p>12 long-term effects could not -- cannot be</p> <p>13 evaluated.</p> <p>14 And then the last sentence, you know,</p> <p>15 "separation of potential effects on psychological</p> <p>16 intervention independent of hormonal effects," I</p> <p>17 think that's another topic that we spent a lot of</p> <p>18 time talking about today, that it's really hard</p> <p>19 to control for psychological intervention because</p> <p>20 no one's going to prescribe a hormonal</p> <p>21 intervention to trans youth with no attempt to</p> <p>22 support them psychologically.</p> <p>23 But I think that in different ways through</p> <p>24 the body of literature that we've taken a little</p> <p>25 journey on today, that we can make attempts to</p>	<p style="text-align: right;">Page 264</p> <p>1 You know, it's a word that I don't often use.</p> <p>2 So I disagree with their conclusion. And,</p> <p>3 you know, I think that -- that I disagree just on</p> <p>4 the face of it based on the review of the</p> <p>5 literature. But then as I put that information</p> <p>6 into practice, you know, I think -- because I</p> <p>7 think that it's fair to say that when we're</p> <p>8 reviewing all these papers and, you know, talking</p> <p>9 to seemingly smart people who may disagree with</p> <p>10 one another, that it can get confusing, like,</p> <p>11 who's right, and that can be overwhelming,</p> <p>12 especially, you know, when we're talking about a</p> <p>13 topic that might be really foreign to someone</p> <p>14 without a lot of exposure or experience working</p> <p>15 with trans people.</p> <p>16 So I think that a not-so-insignificant</p> <p>17 factor in my understanding of this topic also is</p> <p>18 my hundreds of hours of experience working with</p> <p>19 and treating trans youth and watching the</p> <p>20 improvements in their mental health, their</p> <p>21 quality of life, while following the current</p> <p>22 standards of care.</p> <p>23 So, you know, if I were someone sort of on</p> <p>24 the fence, does this evidence support the work</p> <p>25 that I do every day, you know, I think that</p>

<p style="text-align: right;">Page 265</p> <p>1 the -- the Christmas cards from patients</p> <p>2 well-graduated from my clinic, talking about the</p> <p>3 success that they're having, starting a family,</p> <p>4 getting a job, and thanking not only myself but</p> <p>5 the university, the clinic itself for allowing</p> <p>6 them to have a chance at a normal, happy life, I</p> <p>7 think that's not an insignificant factor in how I</p> <p>8 understand the utility, the efficacy of</p> <p>9 gender-affirming care.</p> <p>10 MR. FISHER: Harper, we may be about done</p> <p>11 here. Let's take a short break so we can confer</p> <p>12 and you can confer, and then we'll come back.</p> <p>13 Just a couple minutes.</p> <p>14 MR. SELDIN: Sounds good. Thanks.</p> <p>15 (Recess taken from 5:09 p.m. to 5:10 p.m.)</p> <p>16 MR. FISHER: Doctor, I want to thank you</p> <p>17 very much. I don't have any further questions,</p> <p>18 but I'm going to turn it over to your lawyer, to</p> <p>19 Harper, and he might have some additional</p> <p>20 questions.</p> <p>21 MR. SELDIN: Thank you, Mr. Fisher. We have</p> <p>22 nothing for this witness.</p> <p>23 MR. FISHER: Okay. But Dr. Shumer will read</p> <p>24 and sign the transcript.</p> <p>25 COURT REPORTER: When would you like the</p>	<p style="text-align: right;">Page 267</p> <p>1 UNITED STATES DISTRICT COURT</p> <p>2 SOUTHERN DISTRICT OF INDIANA</p> <p>3 INDIANAPOLIS DIVISION</p> <p>4 K.C., et al.,)</p> <p>5 Plaintiffs,)</p> <p>6 -v-) CASE NO.</p> <p>7 THE INDIVIDUAL MEMBERS OF THE) 1:23-cv-00595-JPH-KMB</p> <p>8 MEDICAL LICENSING BOARD OF)</p> <p>9 INDIANA, in their official)</p> <p>10 capacities, et al.,)</p> <p>11 Defendants.)</p> <p>12 Job No. 181267</p> <p>13 I, DANIEL SHUMER, M.D., state that I have read</p> <p>14 the foregoing transcript of the testimony given by me</p> <p>15 at my deposition on Tuesday, May 16, 2023, and that</p> <p>16 said transcript constitutes a true and correct record</p> <p>17 of the testimony given by me at said deposition except</p> <p>18 as I have so indicated on the errata sheets provided</p> <p>19 herein.</p> <p>20 DANIEL SHUMER, M.D.</p> <p>21</p> <p>22</p> <p>23 STEWART RICHARDSON & ASSOCIATES</p> <p>24 Registered Professional Reporters</p> <p>25 One Indiana Square, Suite 2425</p> <p>Indianapolis, IN 46204</p> <p>(800)869-0873</p>
<p style="text-align: right;">Page 266</p> <p>1 transcript? Is it Monday?</p> <p>2 MR. FISHER: Monday is fine. But I want a</p> <p>3 rough, please.</p> <p>4 COURT REPORTER: Harper, do you want a rough</p> <p>5 and the transcript Monday?</p> <p>6 MR. SELDIN: Yes. I'll have what he's</p> <p>7 having.</p> <p>8 (The deposition concluded at 5:11 p.m.)</p> <p>9</p> <p>10</p> <p>11</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p>	<p style="text-align: right;">Page 268</p> <p>1 STATE OF INDIANA</p> <p>2 COUNTY OF ST. JOSEPH</p> <p>3</p> <p>4 I, Melody M. Goodrich, a Notary Public in and</p> <p>5 for said county and state, do hereby certify that the</p> <p>6 deponent herein was by me first duly sworn to tell the</p> <p>7 truth, the whole truth, and nothing but the truth in</p> <p>8 the aforementioned matter;</p> <p>9 That the foregoing deposition was taken on</p> <p>10 behalf of the Defendants; that said deposition was</p> <p>11 taken at the time and place heretofore mentioned</p> <p>12 between 9:02 a.m. and 5:11 p.m.;</p> <p>13 That said deposition was taken down in</p> <p>14 stenograph notes and afterwards reduced to typewriting</p> <p>15 under my direction; and that the typewritten</p> <p>16 transcript is a true record of the testimony given by</p> <p>17 said deponent;</p> <p>18 And thereafter presented to said witness for</p> <p>19 signature; that this certificate does not purport to</p> <p>20 acknowledge or verify the signature hereto of the</p> <p>21 deponent.</p> <p>22 I do further certify that I am a disinterested</p> <p>23 person in this cause of action; that I am not a</p> <p>24 relative of the attorneys for any of the parties.</p> <p>25 IN WITNESS WHEREOF, I have hereunto set my</p>

1 hand and affixed my notarial seal this 22nd day of
2 May, 2023.

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Notary Public - State of Indiana

10 My Commission Expires: August 10, 2026

Job No. 181267

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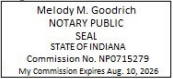
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Melody M. Goodrich



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